

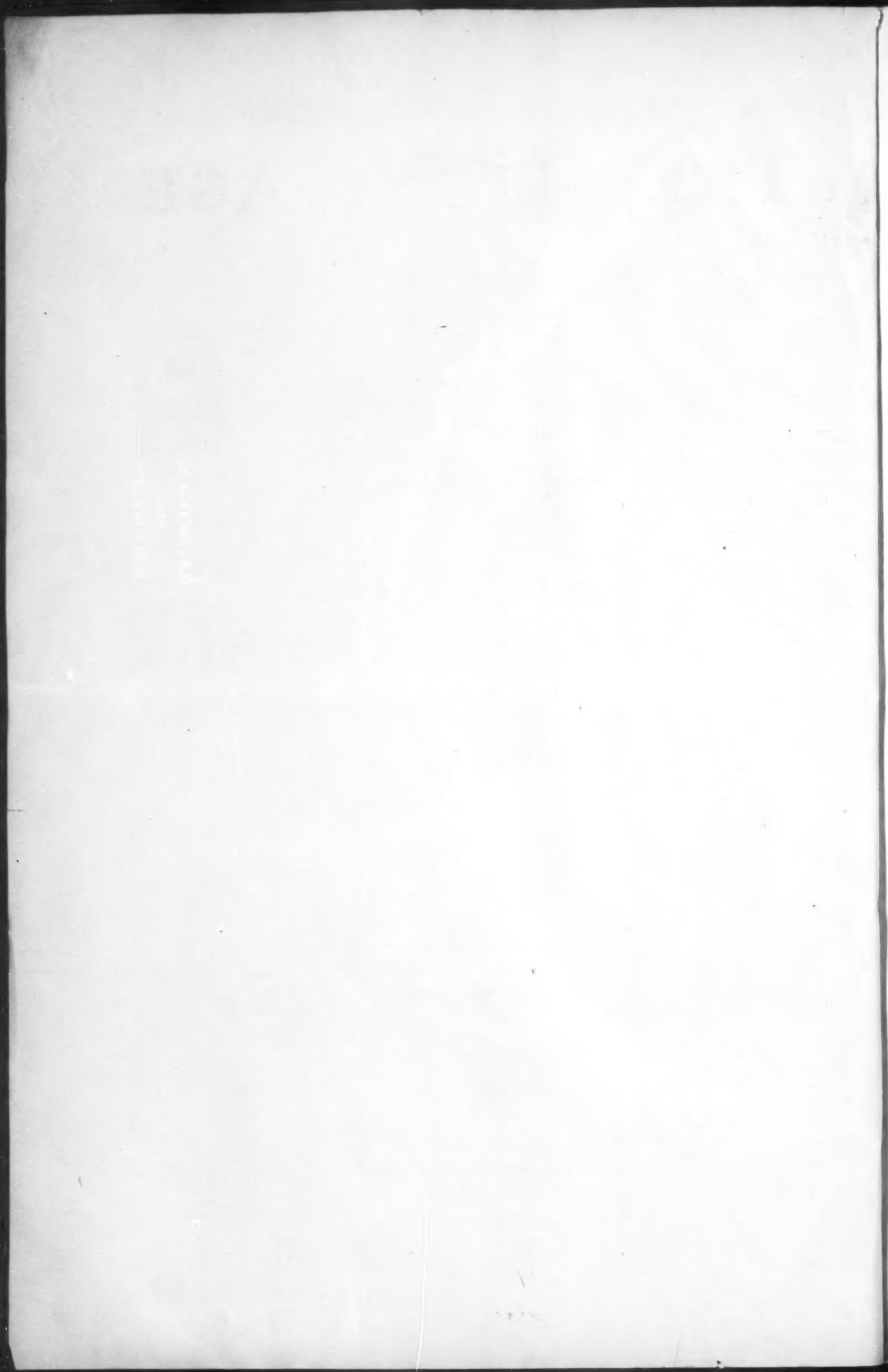
THE IRON AGE

VOL. LXXXVII.

JANUARY—JUNE, 1911.

NEW YORK:
DAVID WILLIAMS COMPANY,
239 West 39th Street.

Q



INDEX.

Illustrated articles indicated by *.

A.

Aberthaw Construction Company: Repairing Concrete Floors, Apr. 20 p 987
 Accelerated Corrosion Test of Metals, June 29 p. 1555
 Accidents: And Safeguards in England, Mar. 23 p 703
 Anti-Accident Inspection Service, Feb. 2 p 288
 Compensation and Conciliation, Apr. 13 p 883
 Compensation in Minnesota, Mar. 2 p 551
 Compensation Legislation in New Jersey and Ohio, Apr. 6 p 825
 Cream City Preventer,* May 4 p 1103
 Employers' Liability and Compensation Systems, Feb 23 p 498
 European Methods of Prevention and Relief, Mar. 16 p 667
 First Aid a Ground for Damages, June 29 p 1553
 Frick Coke Company's Safety Committee, May 18 p 1216
 In Industrial Plants, Jan. 19 p 214
 Industrial Inspection and Prevention, Mar. 30 p 760
 Industrial Safety Association, Mar. 9 p. 587
 Inspection System to Prevent Industrial, Feb 2 p 290
 Mechanical Engineer and Prevention of,* Feb 16 p 434
 Model Compensation Code, Feb. 23 p 498
 New York Compensation Law Void, Mar. 30 p 794
 New York Workmen's Compensation Decision, Mar. 30 p 759
 Prevention in the Machine Shop,* May 18 p 1204
 Private Relief System, Morgan, Jan. 12 p 159
 Safety Devices for Iron Mine Workmen, June 22 p 1539
 Septic Poison's Needless Cost in Works, Jan 12 p 121
 Suggestive Anti-Accident Epigram,* Apr. 27 p 1035
 Workmen's Compensation in Seven States, Apr. 6 p 842
 Works Insurance, Apr. 6 p 818
 Acheson Lubricants, Apr. 13 p 931
 Acid Fume Removing Devices, Obermann,* Mar. 16 p 667
 Acme Blueprint Machine,* Feb. 2 p 329
 Acme Core Machine Company: Core Machine,* Jan. 5 p 88
 Acme Machine Tool Company: Combination Turret Lathe,* Jan. 26 p 283
 Adams Company: Farwell Squeezing Molding Machines,* Jan. 5 p 83
 Adell Bros. Mfg. Company: Paramount Indestructible Steel Clamp,* Apr. 6 p 867
 Administration as a Constructive Science, Works, Jan. 26 p 248
 Advisory Board, Concentrated, May 4 p 1055
 Aerial Craft, Metal Frames for, Apr. 6 p 819
 Aetna Foundry & Machine Company: Billet and Scrap Hauls,* Apr. 13 p 933
 Large Multiple Punch,* Apr. 6 p 860
 African Copper, Jan. 26 p 245
 African Mines, Underground Shops in South, Mar. 30 p 759
 Air Compressor Regulation,* June 22 p 1536

Air Compressor, Roberts Motor,* Jan. 12 p 164
 Air Cooling System for Sheet and Tin Plate Mills, May 4 p 1069
 Air Furnace Dimensions, Calculation of, May 25 p 1257
 Air Furnaces, Oil Fuel for, June 15 p 1465
 Ajax Mfg. Company: Hot Saw and Burring Machine,* Feb. 2 p 318
 Huge Forging Machine,* Mar. 30 p 800
 Alabama Consolidated Coal & Iron Co.: Southern Companies May Merge, Apr. 6 p 825; Apr. 13 p 907
 Alabama, Pig Iron Costs in, May 11 p 1124
 Alaska Copper Coming, Apr. 6 p 823
 Alexander, John: Machine versus Hand Molding, June 29 p 1560
 Algoma Steel Company: Coke Plant,* Apr. 20 p 982
 Allan, A., & Son: Novel Use of Bronze,* June 15 p 1478
 Allen-Bradley Company: Electrical Products, Apr. 21 p 1041
 Allied Machinery Company of America: To Market American Machinery Abroad, May 25 p 1239
 Allis-Chalmers Company: Edison Giant Roll Patents Sustained, June 22 p 1520
 Allner-Boswell Radius Planer Attachment,* Apr. 27 p 1038
 Alexander, John: Experience with Molding Machines, Jan. 12 p 156
 Alliance Machine Company: Crane Business, Mar. 9 p 627
 Foundry Cranes,* Jan 5 p 91
 Allis-Chalmers Company: Life of Electrical Apparatus, Jan. 12 p 122
 Alloys: Castings from Nonferrous, Jan. 12 p 154
 Outerbridge Silicon, Jan. 5 p 44
 Titanium, on Slags, Effect of, Mar. 16 p 657
 Almond, T. R., Mfg. Company: Tool Holder,* Mar. 23 p 742
 Alumaloyd Products Company, Feb. 9 p 373
 Alvey-Ferguson Company: Removal, May 4 p 1107
 American Blower Company: Business Outlook, Feb. 2 p 305
 Electric Forge Blowers,* June 29 p 1576
 Reversible Window Ventilating Device, May 25 p 1281
 Special Centrifugal Blower,* June 1 p 1327
 Ventura Disk Fan,* May 18 p 1222
 American Boiler Manufacturers' Meeting, June 22 p 1530
 American Brass Company: Annual Report, Feb. 23 p 497
 American Can Company: Annual Report, Feb. 23 p 499
 American Electric Furnace Company: Electrical Steel Production at Domburg, May 11 p 1126
 American Electrochemical Society: Convention Programme, Mar. 30 p 815
 Electric Furnace Discussion, Jan. 26 p 261
 American Foundrymen's Association: Convention Programme, May 18 p 1197
 Convention Registration, May 5 p 1121
 Convention Proceedings, May 25 p 1250; June 1 p 1328
 American Gas Furnace Company: Automatic Temperature Controlling Instrument,* June 8 p 1418
 American Institute of Mining Engineers: Convention Programme, May 11 p 1157
 Dr. R. W. Raymond Resigns, Apr. 6 p 821
 Fall Meeting, June 22 p 1512
 Officers, Mar. 2 p 534
 To Change Its Name, June 1 p 1361
 American Iron & Steel Association: Our Record Production of Steel in 1910, Mar. 23 p 704
 American Iron & Steel Mfg. Company: Annual Report, Feb. 16 p 423
 American Iron and Steel Institute: Announcement, April 27 p 1018
 Annual Meeting, May 4 p 1056
 Considers Welfare Work, May 4 p 1056
 Officers, June 1 p 1297
 American Iron, Steel & Heavy Hardware Association Convention, June 1 p 1297
 American Machinery In Europe, May 18 p 1198; June 15 p 1481
 American Mining Congress: Coal Miners' Compensation Plan, Mar. 16 p 661
 American Motor Truck Company: Important Commercial Automobile Consolidation, Mar. 30 p 777
 American Pulley Company: Pulleys with Cork Set in Faces,* May 11 p 1167
 American Radiator Company: Annual Report, Mar. 16 p 679
 American Rolling Mill Company: Equipment of Hagan Furnaces, Mar. 9 p 666
 American Sheet & Tin Plate Company: Air Cooling System, May 4 p 1069
 Announcement, June 8 p 1423
 Apollo Galvanized Sheets for Culverts, Mar. 2 p 535
 Apollo Sheet Steel Calendar, Jan. 12 p 146
 Starts Gary Plant, June 8 p 1399
 American Society for Testing Materials: Announcement, Feb. 2 p 313
 Coming Convention, Apr. 27 p 1035
 Convention Programme, May 4 p 1078; June 1 p 1297
 American Society of Engineer Draftsmen, June 1 p 1346
 American Society of Mechanical Engineers: Convention Proceedings, June 1 p 1308; June 8 p 1411*
 Monthly Meeting, Feb 9 p 374
 Spring Meeting Announcement, Mar. 2, p. 545; Apr. 27 p 1033
 American Specialty Stamping Company: Obermann Acid Fume Removing Devices,* Mar. 16 p 667
 American Spiral Pipe Works: Large Sizes of Lap Welded Pipe,* Feb. 2 p 324
 American Steel Foundries: Davis Cast Steel Car Wheel,* May 4 p 1090
 Large Castings in Fast Time, June 29 p 1588
 American Steel & Wire Company: Museum of the Wire Industry,* June 22 p 1522
 American Supply & Machinery Manufacturers' Association: Bureau of Promotion, Feb. 16 p 406
 Convention Announcement, Feb. 2 p 323
 Convention Proceedings, April 6 p 840; April 13 p 904

JANUARY-JUNE, 1911.

American Tobacco Decision, June 1 p 1296

American Tool Works Company:
High Duty Lathe,* June 1 p 1363
Lathes,* Mar. 2 p 546

American Wire Brush Company:
Purchased by the Osborn Mfg. Company, Apr. 13 p 900

Analyses:
Lake Superior Iron Ore, Apr. 13 p 906
Standard for Foundry Coke, June 22 p 1515

Analysis Books of Lake Superior Ores, Mar. 9 p 573

Andrews Side Frame Patent Sustained, June 1 p 1347

Angle Steel Tool Company:
Tool Truck,* June 29 p 1575

Annealing Malleable Castings, Mar. 23 p 726;* April 20 p 948

Anniversary, Notable, April 13 p 883

Anthony, Prof. Gardner C.:
Time Factor and Clearance in Punching Plates,* June 15 p 1480

Anti-Boycott Decision, Noteworthy, Jan. 26 p 232

Anti-Trust Cases, Feb. 23 p 458

Anti-Trust Cases, Reason in, May 18 p 1180

Anti-Trust Decisions, Application of the, June 8 p 1378

Apprenticeship:
Demand for Broad Foundry Training, Feb 2 p 311

Navy Yard, April 6 p 850

Novelty in Systems, Mar. 9 p 571

Pennsylvania Railroad Company, Apr. 6 p 851

Westinghouse System,* April 6 p 848

Arcade Mfg. Company:
Molding Machines,* Jan. 5 p 88

Molding Thin Castings on a Jarring Machine,* April 20 p 980

Rotary Sand Sifter,* April 27 p 1042

Arctic Circle, Iron Mining Beyond the,* Mar. 9 p 608

Ardelt, R.:
Cast Iron Pipe Molding,* May 4 p 1008

Ardrey, R. L.:
Chicago Iron Trade in 1910, Jan 5 p 60

Arendals Power Company:
Electric Iron and Steel in Norway, Feb. 2 p 291

Armstrong-Blum Mfg. Company:
High-Speed Saw with Automatic Stock Feed,* June 1 p 1364

Association of American Steel Manufacturers:
Annual Meeting, Mar. 9 p 595

Atherton, L. M.:
Copper Trade in 1910, Jan. 5 p 63

Atha Tool Company:
Automatic Handle Sander,* May 18 p 1218

Atlantic City Railway Convention Exhibits, June 22 p 1518

Atlas Car & Mfg. Company:
Foundry Cars,* Jan. 5 p 92

Auel, C. B.:
Machine Tool Arrangement, May 25 p 1278

Auto Sand Mixer,* Jan. 5 p 112

Autogenous Welding Company:
High Duty Polishing Machine,* Mar. 23 p 735

Autogenous Welding Equipment Company, Jan. 5 p 49

Automatic Transportation Company:
Electric Freight Truck,* May 11 p 1161

Automobiles:
Advantages of Worm Drive, May 4 p 1070

An Economic Good, Jan. 19 p 175

German Depreciation and Repair Cost, May 11 p 1151

Growing Use of the Industrial, Jan. 12 p 121

Important Commercial Consolidation, Mar. 30 p 777

Making Duplicate Parts,* Mar. 9 p 666

New Art in Building, May 11 p 1124

Notes on Motor Truck Performances, Jan. 12 p 145

Standardization by Automobile Engineers, Apr. 6 p 857

B.

Babbitt Metal Formula, "Original," May 18 p 1202

Babcock & Wilcox Company:
Battleship Delaware Boiler Accident, Mar. 30 p 783

Badge, F. J.:
Oilstone Holder,* Apr. 13 p 931

Bailey Sheet Furnace Equipment, May 25 p 1258

Baily, Thaddeus F.:
Electric Furnace,* May 4 p 1094

Baird Machine Company:
Improved Tumbling Barrel,* Feb. 23 p 489

New Ball Burnishing Barrel,* Apr. 27 p 1033

Baker, W. J.:
Hammer Flue Cleaner,* May 25 p 1274

Baldwin, A. S., & Co.:
Reilly Friction Clutch,* Feb. 23 p 490

Baldwin Locomotive Works:
Annual Report, Mar. 30 p 777

Labor Troubles, June 15 p 1463; June 29 p 1593

Locomotives Built in 1910, Jan. 12 p 151

New Incorporation, June 29 p 1577

New Interests In, May 11 p 1165

Ball Burnishing Barrel, New Baird,* Apr. 27 p 1033

Bands and Boxes, Diamond Slip-Over,* Jan. 5 p 115

Baraboo District; Iron Ore in Hundreds of Millions of Tons,* Mar. 9 p 618

Barb Wire Machine, Blashill & Gray,* Jan. 5 p 53

Barnes Drill Company:
Motor-Driven Gap Lathe,* Jan. 26 p 281

Interesting Application of a Tapping Machine,* June 29 p 1580

Barnes, W. F. & John, Company:
Special Horizontal Drilling Machine,* Mar. 9 p 617

Barrel, New Baird Ball Burnishing,* Apr. 27 p 1033

Barrow Hematite Steel Company, Ltd.:
British Steel Companies Not Prosperous in 1910, Mar. 16 p 658

Barry & Zecher Company:
Zeecher Cupola,* Jan. 5 p 98

Bartlett, C. O., & Snow Company:
Mechanical Coke Quencher,* June 22 p 1531

Bars and Shapes from Waverly Warehouse, Extras on, May 11 p 1143

Bassett-Presley Company:
Purchased by Carnegie Steel Company, June 15 p 1465

Bath Grinder Company:
Duplex Internal Grinders,* Mar. 23 p 736

Batteries, Storage, Feb. 23 p 474

Battleship Delaware Boiler Accident, Mar. 30 p 783

Battleship Maine, Raising the,* June 8 p 1430

Bayonne Steel Casting Company:
Features of a Modern Steel Foundry,* April 6 p 852

Bates Machine Company:
Improvement in Feed Water Heating,* June 29 p 1592

Bauer and Wetzel:
Injuries to Tender Wheel Tires Through Strong Local Cold Work,* June 29 p 1577

Beaman & Smith Company:
Machine for Boring Engine Valves,* May 25 p 1282

Bearing, Hill Rolling Mill,* Jan. 5 p 49

Belgian Iron and Steel Production in 1910, June 29 p 1567

Belgian Supplies of Iron Ore, May 18 p 1202

Bellows, Osborn Molders', Mar. 2 p 548

Belt Factory at Passaic, N. J., Dick, May 18 p 1207

Bench, Oliver New Universal Saw,* Jan. 5 p 109

Bender and Straightener, New Underwood Power,* Mar. 9 p 596

Bender, Wallace Hand Power Bar,* Mar. 30 p 792

Benjamin Electric Mfg. Company:
Tungsten Mill Cluster,* Feb. 2 p 331

Berg, P. T.:
Improved Cinder Car,* Mar. 23 p 739

Berger Mfg. Company:
Raydiant Sidewalk Lights for Interior Use, Feb. 2 p 306

Berlin, American Association of Commerce and Trade, Apr. 27 p 1040

Bessemer & Lake Erie Railroad:
Tonnage, Mar. 9 p 585

Best, W. N.:
Oil Fuel for Air Furnaces, June 15 p 1465

Bethlehem Steel Company:
Duplex Process,* Mar. 30 p 784

Bethlehem Steel Corporation:
Annual Report, Apr. 6 p 845

Bettendorf Axle Company:
Enlarged Steel Car Plant,* Apr. 6 p 858

Interesting Curtis Turbine Installation,* Feb. 23 p 492

Betterment of Steel Works Labor Conditions, May 11 p 1144

Betton, J. M.:
Drucklieb Multiple Injector Sand Blast,* Apr. 13 p 923

Drucklieb Sand Blast Specialties,* Jan. 5 p 103

Bickford Machine Company:
New Automatic Tap Fluter,* May 25 p 1281

Billet and Scrap Hauls, Etna,* Apr. 13 p 933

Binders for Foundry Cores, May 11 p 1140

Birkinbine, John:
Forty Years' Progress in Pig Iron,* June 22 p 1516

Birmingham District, Steel Corporation Construction in the, May 4 p 1089

Blackwell, Geo. G., Sons & Co., Ltd.:
Titanium in Steel and Iron, Apr. 20 p 992

Blair Engineering Company:
Open Hearth Furnaces with Magnesite End Blocks, Mar. 23 p 716

Blaisdell Machinery Company, May 11 p 1126

Blashill & Gray:
Barb Wire Machine,* Jan. 5 p 53

Blast Furnaces:
See Furnaces, Blast.

Blast Pressures, Sand, Feb. 9 p 350

Blast, Sand, Drucklieb Multiple Injector,* Apr. 13 p 923

Bliss, E. W., Company:
Straight Sided Press of Unusual Proportions,* Jan. 5 p 45

Block, Patterson Six Sheave Steel,* Jan. 5 p 47

Blooming Mill with Novel Features, Feb. 2 p 310

Blowers:
American Electric Forge,* June 29 p 1576

Buffalo Steel Plate Pressure,* Feb. 2 p 331

Connersville Applied to Vacuum Cleaning,* May 11 p 1166

Connersville Rotary Positive,* Jan. 5 p 102

Economy Tests of a Turbine-Driven Furnace, May 4 p 1070

Green Foundry,* Mar. 9 p 621

Special Centrifugal,* June 1 p 1327

Sturtevant Foundry,* Jan. 5 p 101

Turbine Driven Gas, Apr. 13 p 933

Blowing Engine Practice, Future in, June 15 p 1463

Blueprint Machine, Acme,* Feb. 2 p 329

Boedicker, G. A.:
Metal Rolling in the United States, Apr. 20 p 966

Boiler Accident, Battleship Delaware, Mar. 30 p 783

Boiler and Machine Shops of Improved Construction,* Jan. 19 p 216

Boiler Feed Records, Analysis of,* Jan. 12 p 170

Boilermakers' Association, International Master:
Convention Proceedings, June 8 p 1383

Boiler Manufacturers' Meeting, American, June 22 p 1530

Boiler Performance, Remarkable, May 25 p 1238; June 22 p 1500

Boiler Repair Bolts, Diamond,* Feb. 9 p 388

Boiler Shop and Dipping Tank, Cambria,* Mar. 16 p 668

Boiler Tubes, Process of Manufacturing Locomotive,* May 4 p 1104

Bolling & Lowe:
British Iron Trade in 1910, Jan. 5 p 29

Bollman-Wilson Foundry Company:
Punch with a 48,000-lb Body Casting,* June 29 p 1571

Bolt, Nut and Rivet Men Dine Together, Mar. 2 p 518

Bolts:
Diamond Boiler Repair,* Feb. 9 p 388
Diamond Expansion Toggle,* Mar. 9 p 596

Bond, Vivian, & Co.:
Pittsburgh Business, Apr. 20 p 987

Book Reviews:
Analysis of Paints and Painting Materials, Jan. 26 p 235

Applications Industrielles de l'Electricité (Industrial Applications of Electricity), Mar. 16 p 645

A Practical Guide to Iron and Steel Works Analyses, Mar. 23 p 705

Backbone of Perspective, Feb. 9 p 370

Chemistry for Beginners, May 25 p 1260

Drop Forging, Die Sinking and the Machine Forming of Steel, Mar. 9 p 573

Dynamo Electric Machinery, Mar. 23 p 705

Electric Railway Dictionary, June 29 p 1579

Elementary Practical Mechanics, Feb. 16 p 407

Engineering Directory for 1911, Mar. 9 p 573

Engineering Index Annual, 1910, Mar. 16 p 645

Fowler's Mechanics' and Machinists' Pocket Book and Diary for 1911, Jan. 12 p 122

Homestead: the Households of a Mill Town, Mar. 30 p 798

Hydroelectric Practice, May 25 p 1259

Industrial Plants: Their Arrangement and Construction, Feb. 23 p 460

Introduction à la Métallographie Microscopique (Introduction of Microscopic Metallography), Jan. 12 p 122

Inventors and Inventions, Apr. 6 p 836

Iron Ore Manual of the Lake Superior District, May 25 p 1260

Machine Shop Primer, Feb. 16 p 407

Mechanical Engineers' Pocket-Book, May 4 p 1056

Mechanics for Engineers, Mar. 23 p 705

Metal Statistics, Feb. 16 p 407

Monoplanes and Biplanes, June 29 p 1579

Motion Study, May 25 p 1260

Outlines of Iron and Steel Metallurgy, (Grundzüge des Eisenhüttenwesens), Jan. 26 p 235

Pocketbook of Mechanical Engineering, Jan. 26 p 235

Popular Handbook for Cement and Concrete Users, Feb. 23 p 460

Practical Alloying, Feb. 9 p 370

Practical Stamp Milling and Amalgamation, Feb. 9 p 370

Production of Malleable Castings, May 25 p 1259

Scientific American Cyclopedia of Formulas, Jan. 26 p 235

Scientific Management and Railroads, Mar. 30 p 799

Smoley's Parallel Tables of Logarithms and Squares, Mar. 9 p 573

Statistics of the American and Foreign Iron Trades, Jan. 19 p 177

Textbook of the Elements of Machine Work, Apr. 6 p 836

Testing for Metallurgical Processes, Feb. 9 p 370

Textbook of the Principles of Machine Works, Apr. 6 p 836

The Aeroplane, Mar. 9 p 573

The Iron Ores of Lake Superior, May 18 p 1215

The Life and Life Work of Charles B. Dudley, May 25 p 1260

The Steel Workers, Mar. 30 p 798

Welding, Feb. 9 p 370

Bope, Henry P.:
Pittsburgh's Position in Steel, Feb. 2 p 304

Boring, Drilling and Milling Machine, Special Fosdick Horizontal,* May 4 p 1107

Boring Mills:
Cincinnati Planer Company,* Jan. 26 p 270

Cleveland Horizontal,* Jan. 5 p 47

Colburn Motor-Driven,* Mar. 9 p 617

Dresses Vertical, New,* Apr. 27 p 1025

Universal No. 3,* Mar. 30 p 790

Borings, Briquettes from Cast, Jan. 12 p 152

Borings, Briquetting Metal,* June 1 p 1344

Boston, Congress of Technology at, Mar. 9 p 592; Mar. 16 p 686; Mar. 30 p 788; Apr. 20 p 967

Bounties, Canada's Iron and Steel, Apr. 13 p 921

Bounties May be Renewed, Canada's Steel, Feb. 16 p 424

Boxes and Bands, Diamond Slip-Over,* Jan. 5 p 115

Boycott, Bill to Legalize the, Feb. 16 p 423

Boycott Suit to be Retried, Famous Danbury Hat, Apr. 13 p 900

Bracket, Patterson Adjustable Electric Light,* Apr. 20 p 981

Bradlee & Co.:
Chain Information, Jan. 5 p 67

Bradley Mfg. Company:
Heating Furnace Doors,* Jan. 12 p 168

Brake, Prony, May 25 p 1266

Brandon, George R.:
Mechanical Charging of Cupolas,* June 8 p 1426

Brass Melting Furnace, M. R. V.,* Feb. 9 p 388

Brass Melting Furnaces, Jan. 5 p 82

Brass Mill, Electrically Driven,* Jan. 26 p 278

Bray, Thomas J.:*
President of the Republic Iron & Steel Company, Mar. 23 p 704

Brayshaw, S. N.:
Hardness of Quenched Tool Steels,* May 25 p 1256

Brazil, Itabira Iron Mines in, Apr. 27 p 1007

Brazilian Iron Mines, British Interests Acquire, Jan. 26 p 234

Bridgeport Safety Emery Wheel Company:
No. 1/2 Motor-Driven Grinder,* Mar. 30 p 803

Bridges:
Essex-Merrimac Chain, May 4 p 1075

Quebec, Feb. 2 p 313; Feb. 16 p 437; Feb. 23 p 479; Apr. 13 p 901

Special for Ladle Cars,* Apr. 27 p 1031

Unique Draw at Portland, Ore., Jan. 5 p 81.

Briquettes from Cast Borings, Jan. 12 p 152

Business Methods, Modern, Apr. 13 p 905

Buyers' and Sellers' Bureau of Cleveland, Ohio, May 4 p 1101

Buying, Two Influences in Machinery, June 22 p 1499

By-Product Coke Ovens in America, June 8 p 1422

By-Product Coking and Wood Preservation, Jan. 5 p 3

Bylesby, H. M., & Co.:
Convention, Feb. 2 p 305

Briquettes, Iron Ore, Feb. 9 p 374

Briquetting Metal Borings,* June 1 p 1344

Briquetting Plant, Gröndal Iron Ore, Mar. 9 p 594

British Engineering Standards Committee:
Specifications for Cold Drawn Weldless Steel Tubes, Apr. 27 p 1024

British Interests Acquire Brazilian Iron Mines, Jan. 26 p 234

Bristol Company:
Class III Recording Thermometer,* Jan. 19 p 213

British Iron Trade, Jan. 5 p 29; Feb. 26 p 404; Mar. 16 p 661

British Pig Iron Output, First Half of 1910, Jan. 12 p 122

British Pig Iron Production in 1910, May 25 p 1257

British Steel Companies Not Prosperous in 1910, Mar. 16 p 658

British Steel Production in 1910, June 29 p 1555

British Trade Conditions Less Favorable, Apr. 13 p 901

Brussels Exposition:
Machine Tool Awards, Feb. 16 p 424

Broderick & Bascom Rope Company:
Wire Rope Trade Inquiry, Jan. 5 p 5

Brombacher, Max H. C.:
Railroad Repair Shop Efficiency, Jan. 5 p 31

Welfare Work, May 25 p 1276

Bronze Drum Casting, Huge,* Mar. 16 p 681

Bronze, Novel Use of Allan,* June 15 p 1478

Brooklyn Engineers Club's Exhibition, May 4 p 1076

Brown & Zortman Machinery Company:
Fire, June 1 p 1318

Brown, Fordyce W.:
Heating Furnace Doors,* Jan. 12 p 168

Brown Hoisting Machinery Company:
New Ore Unloading Plant,* Apr. 6 p 861

Brown-Ketcham Iron Works:
Receivership, June 8 p 1425

Brown, Richard P.:
Measurement of High Temperatures in Modern Foundry Practice, Apr. 13 p 918

Browning Engineering Company:
Pile Driver,* Feb. 23 p 488

Brussels, Belgium:
International Iron and Steel Conference, Feb. 23 p 471

Brussels International Conference, June 22 p 1501

Brymbo Steel Company, Ltd.:
Dry Air Blast at a British Furnace Plant,* May 11 p 1157

Buch's, A., Sons Company:
Combined Jarring and Squeezing Molding Machine,* June 8 p 1424

Gravity Molding Machine,* Jan. 5 p 84

Buffalo Coke Rates Hearing, Apr. 13 p 901

Buffalo Forge Company:
Fan 30 Ft. High,* May 18 p 1203

Feed Water Strainer,* May 18 p 1222

Large Order for Fans, Mar. 16 p 685

New Type Slow Speed Exhaust Fan,* June 29 p 1571

Steel Plate Pressure Blower,* Feb. 2 p 331

Buffalo Foundry & Machine Company:
Huge Bronze Drum Casting,* Mar. 16 p 681

JANUARY-JUNE, 1911.

Buffalo Steam Pump Company:
Self-Contained Vertical Sump Pump,* June 8 p 1429
Building Material Exhibition, National, May 18 p 1213
"Building Up" Impurities in Steel, Feb. 23 p 480; Mar. 2 p 537
Bullard Machine Tool Company:
New Vertical Turret Lathe,* June 1 p 1352
Bull, R. A.:
Protecting Metal from Superincumbent Slag, June 29 p 1554
Bunnell, Sterling H.:
Engineer as a Salesman, Jan. 19 p 200
Right Principles in Works Management, May 4 p 1084
Selection of Factory Equipment, May 18 p 1196
Bureau of Standards:
Emery Testing Machines, May 4 p 1103
New Samples of Steel and Ore, Feb. 2 p 327
Burden to Labor, Ratio of, Apr. 20 p 965
Burgess, Charles F.:
Electrolytic Iron, Jan. 26 p 268
Burners, Hauck Portable Oil,* Jan. 5 p 98
Burt Mfg. Company:
More Filters for the Gary Works, June 1 p 1365
Busch, J. C.:
Power Sprue Cutter,* Feb. 23 p 495
Business Administration as a Constructive Science, Mar. 16 p 662; Mar. 23 p 722

C.

Calcium Chloride for Drying the Blast,* May 25 p 1270
Calder, John:
Mechanical Engineer and Prevention of Accidents, Feb. 16 p 324
California Metal Trades Association:
Annual Meeting, Feb. 2 p 311
Calorimeter, Doherty Gas,* Apr. 13 p 928
Calumet Engineering Works:
Crane Type Tumbler,* Feb. 2 p 330
Cupola,* Jan. 5 p 97
Cambria Paint & Color Company:
Improvements, April 6 p 841
Cambria Steel Company:
Annual Report, Mar. 9 p 591
Boiler Shop and Dipping Tank,* Mar. 16 p 668
New Wire Plant,* Mar. 23 p 730
Southwark Reversible Convertible Simple or Compound Engine,* Apr. 13 p 930
Cameron, A. S., Steam Pump Works:
Ingersoll-Rand Alliance, Jan. 19 p 222
Cammell, Laird & Co. of New York, Feb. 2 p 317
Canada:
Blashill & Gray Barb Wire Machine,* Jan. 5 p 53
British-Canadian Shipbuilding & Dock Company—New Plant, June 15 p 1480
Duty on Rerolled Rails, Jan. 26 p 261
Economic Upbuilding, Jan. 19 p 202
Handling Iron Ore with Electromagnets, Feb. 16 p 431
Heavy Rail Contracts, May 4 p 1101
Iron and Steel Bounties, Apr. 13 p 921
Iron and Steel Works Extensions, Jan. 12 p 158
Manufacturers Oppose Reciprocity, Jan. 19 p 211
Mineral Output in 1910, Mar. 23 p 729
Pig Iron Production in 1910, Feb. 23 p 502
Port Mann, the New City, Mar. 30 p 804
Quebec Bridge, Feb. 2 p 313; Feb. 16 p 437; Feb. 23 p 479; Apr. 13 p 901
Railway Club Meeting, Feb. 2 p 310
Reciprocity Agreement—Duties Named, Feb. 2 p 313

Steel Bounties May be Renewed, Feb. 16 p 424
Steel Interests and Reciprocity, Feb. 2 p 310
Trade with the United States, Feb. 23 p 502
Wire Rod Trade, June 1 p 1317
Canals, New York Barge, May 4 p 1057
Canton Sheet Steel Company:
Bailey Sheet Furnace Equipment, May 25 p 1258
Cap Screw, Hart Hollow,* Feb. 9 p 389
Carborundum Company:
Some Remarkable Products,* Feb. 16 p 443
Carlin's, Thomas, Sons Company:
Contracts, June 29 p 1589
Carnegie Steel Company:
Buys Bassett-Presley Company, June 15 p 1465
Extras on Bars and Shapes from Waverly Warehouse, May 11 p 1143
Publications on Steel Mine Timbers, May 11 p 1142
Question of Extras in the Eastern Jobbing Trade, Apr. 27 p 1007
Relief Fund, Feb. 9 p 363
Carnegie Technical School Lectures, Feb. 2 p 330
Carpenter & Edwards:
Production of Castings to Withstand High Pressures, Jan. 12 p 154
Carpenter, Prof. H. C. H.:
Growth of Cast Iron, Mar. 23, p 744; June 1 p 1327
Carr, Clyde Mitchell,* President Joseph T. Ryerson & Son, Feb. 9 p 369
Cars:
Atlas Foundry,* Jan. 5 p 92
Berg Cinder, Improved,* Mar. 23, p 739
Enlarged Bettendorf Steel Plant,* Apr. 6 p 858
Ernst Wiener Foundry,* Jan. 5 p 97
Monarch Core and Annealing Oven,* Jan. 5 p 95
Weimer Cinder, New,* Jan. 5 p 46
Number of Car Wheels, Apr. 20 p 947
Cast and Rolled Material, Competition Between, June 1 p 1294
Cast Borings, Briquettes from, Jan. 12 p 152
Castings:
Annealing Malleable, Mar. 23 p 726;* Apr. 20 p 948
Cylinder, Made on a Mumford Molding Machine,* Feb. 23 p 496
Experience with Permanent Molds, June 8 p 1402
From Nonferrous Alloys, Jan. 12 p 154
Gas Cavities and Shot in Iron,* June 1 p 1339
Huge Bronze Drum,* Mar. 16 p 681
Huge Cast Iron Still,* May 11 p 1166
Large Steel in Fast Time,* June 29 p 1588
Molding Thin, on an Arcade Jarring Machine,* Apr. 20, p 980
Ornamental, Made in Permanent Molds,* Jan. 5 p 68
Proposed Malleable Plant,* Jan. 5 p 72
Shot Iron and Hard Shots in, Jan. 5 p 52
Use of Briquettes from Cast Borings, Jan. 12 p 152
White Irons and the Prevention of Growth in, Mar. 23 p 744
Cast Iron Car Wheel and the Grinding Machine, Feb. 23 p 459
Cast Iron, Growth of, June 1 p 1327
Cast Iron Pipe Molding,* May 4 p 1098
Cast Iron, Vanadium in, June 8 p 1398
Cast Iron Pipe Prices from 1900 to 1910,* Mar. 2 p 534
Cast Iron Wheels, Ferromanganese in Chilled, Apr. 6 p 820
Catalogues, Suggestions Wanted for Size, Mar. 2 p 519
Cedar Rapids Foundry & Machine Company:
Gasoline Engine Speed Regulator, Mar. 9 p 586
Center Finder, Sure,* Apr. 27 p 1031
Central Foundry Company:
Reorganized, May 18 p 1203
Central Station Welfare Work, Apr. 20 p 973
Chain Bridge, Essex-Merrimac, May 4 p 1075
Chain Information, Jan. 5 p 67
Chain Oil Feed, Spencer Universal,* June 29 p 1587
Chandler & Farquhar Company:
Expansion, Feb. 2 p 317
Chandler & Taylor Company:
Molding Thin Castings on an Arcade Jarring Machine,* Apr. 20 p 980
Changeezy and Delta Tramrail Trolleys,* Jan. 5 p 93
Charcoal Blast Furnace, New, May 4 p 1069
Charcoal Pig Iron for Chilled Car Wheels, New, Mar. 9 p 605
Charging of Cupolas, Mechanical,* June 8 p 1426
Chelsea Piers, Fuel Handling on the,* Feb. 23 p 497
Chemical Engineers:
Announcement of June Meeting, Feb. 2 p 317
Chemical Industry, Society of:
Treatment and Purification of Boiler Feed Water, Mar. 2 p 533
Chicago Foundry Foremen's Association, Jan. 26 p 249; Feb. 16 p 407
Chicago Iron Trade in 1910, Jan. 5 p 60
Chicago Metal Trades Annual Meeting, Mar. 23 p 740
Chicago Municipal Exposition, Jan. 5 p 82
Chicago Perforating Company, June 15 p 1485
Chicago Pneumatic Tool Company:
Annual Report, Feb. 23 p 501
Contrast in Air Compressors,* May 18, p 1216
Pneumatic Sand Rammers, Jan. 5 p 107
Chicago Railway Equipment Company:
Annual Report, Mar. 9 p 596
Chicago Railways Company:
Novel Application of Motor Drive to Machine Tools,* May 4 p 1088
Chilean Buyers in New York, May 11 p 1150
Chilled Rolls with Passes Cast in,* May 25 p 1269
Chloride for Drying the Blast, Calcium,* May 25, p 1270
Chokio Water Works Bids, May 4 p 1081
Chromium, Determination of Manganese in the Presence of, May 11 p 1156
Chucks:
Garvin Automatic,* Mar. 9 p 626
Moller Oval,* Jan. 5 p 52
Murchey Revolving,* Feb. 23 p 406
Weaver Roller Jaw,* Jan. 19 p 223
Church, A. Hamilton:
Distributing Expense Burden, June 1 p 1325
Cincinnati Foreman's Club, Mar. 16 p 657
Cincinnati Foundry Foremen, May 4 p 1085
Cincinnati Gasket & Packing Company:
Triple and Trinity Gaskets,* Jan. 19 p 222
Cincinnati Gear Cutting Machine Company:
No. 5 Gear Cutter,* Apr. 27 p 1039
Cincinnati Iron Trade in 1910, Jan. 5 p 62
Cincinnati Planer Company:
Boring Mill,* Jan. 26 p 270
Distributing Factory Operating Costs,* June 15 p 1479
Shop Cost Accounting,* Mar. 2 p 554
Cincinnati Pulley Machinery Company:
Heavy Duty Pulley Lathe,* Apr. 27 p 1041

Cincinnati Punch & Shear Company:
Leighton Combination Punch and,*
Shear,* Mar. 16 p 680

Cincinnati Shaper Company:
Shaper with Jib Crane,* Mar. 23 p 729

Cincinnati's Industrial Development,
Mar. 30 p 797

Cinder Notch, Rifle Shots Open a
Chilled, Feb. 2 p 311

Clamp, Paramount Indestructible Steel,*
Apr. 6 p 867

Clapp, E. D., Mfg. Company:
Improvements, Jan. 5 p 81

Clark, W. A.:
Iron Ore Docks on the Lakes,* Apr.
20 p 972

Claussen, Oscar, Engineering Company:
Chokio Water Works Bids, May 4 p
1081

Clayton Air Compressor Works:
Motor Driven Air Compressors,* Apr.
20 p 975

Cle-Gal-Co Pattern Shop and Foundry
Supplies,* Jan. 5 p 114

Cleats and Press, Kant-Leak,* Mar. 16
p 675

Cleveland Crane & Engineering Com-
pany:
Monorail Grab Bucket Coal Hoist,*
Mar. 2 p 550

Cleveland, Erie Railroad Ore Docks in,
Mar. 23 p 729

Cleveland Galvanizing Works Company,
Cle-Gal-Co Pattern Shop and Foundry
Supplies,* Jan. 5 p 114

Cleveland Machine Tool Works:
Horizontal Boring Mill,* Jan. 5 p 47

Cleveland Nickel Works:
Superior Tumbling Mills,* Jan. 5 p
104

Cleveland, Ohio, Buyers' and Sellers'
Bureau at

Cleveland Pneumatic Tool Company:
Pneumatic Hammers and Rammers,*
Jan. 5 p 107

Portable Pneumatic Grinder,* Jan. 12
p 162

Cleveland Steel Tool Company:
Hydromatic Water Valve,* May 18 p
1219

Cleveland Superintendents and Fore-
men, Mar. 23 p 717

Climax Hoist Company:
Spur Geared Chain Hoist,* Apr. 6 p
860

Clough, R. M.:
Vertical Combination Bench Miller
and Drill,* May 25 p 1273

Clutch, Reilly Friction,* Feb. 23 p 490

Coal:
Analysis by Consumers, June 1 p 1317
A Thousand an Acre for Connellsville,
June 15 p 1447

Miners' Compensation Plan, Mar. 16
p 661

Production of, in 1910, May 18 p 1207

Coal Distillation Company:
Collins By-Product Coke Oven, Feb.
23 p 513

Cobb, John W.:
Corrosion of Iron, June 8 p 1417

Coils, Westinghouse Air-Cooled Choke,*
June 29 p 1576

Coke:
Algoma Steel Company's Plant,* Apr.
20 p 982

Bartlett & Snow Mechanical Quench-
er,* June 22 p 1531

Buffalo Rates Hearing, Apr. 13 p 901

By-Product Ovens and Conservation,
Feb. 9 p 374

By-Product Ovens in America, June
8 p 1422

Collin By-Product Oven, Feb. 23 p 513

Connellsville Interests and Railroad
Discrimination, Mar. 2 p 519

Connellsville Output in 1910, Jan. 12
p 133

Foundry, June 22 p 1515

Koppers Ovens, June 29 p 1554

New Rates, Apr. 6 p 838

Oven Gas in Open Hearth Furnaces,
Feb. 2 p 318; May 18 p 1232; June
22, p 1501

Ovens at Lorain, Ohio, Mar. 9 p 588

Producers' Association, Mar. 23 p 734

Size of Charge for a Cupola, June 29
p 1555

Cooking, Wood Preservation and By-
Product, Jan. 5 p 3

Cold Rolling of Standard Sections,
Forming Special Shapes by,* May
18 p 1215

Collars for Emery Wheels, Safety, Mar.
30 p 804

Collin By-Product Coal Oven, Feb. 23
p 513

Colburn Machine Tool Company:
Motor Driven Boring Mill,* Mar. 9
p 617

Collector, Morse Dust,* Jan. 5 p 101

Collins, Fletcher:
Standards for the Various Kinds of
Pig Iron, June 8 p 1400

Columbia Steel Foundry,* Jan. 12 p 160

Columbia Tool Steel Company:
Salesmen, Jan. 5 p 18

Commercial Bureau Company:
Export Assisting Plan, May 25 p 1260

Commercial Engineers' Association, Chi-
cago, May 4 p 1121

Commercial Vehicles, Advantages of
Long Stroke Motors for, Mar. 23
p 744

Compensation:
And Conciliation, Accident, Apr. 13 p
883

And Liability Systems, Employers',
Feb. 23 p 498

Coal Miners' Plan, Mar. 16 p 661

Constitutional Law, June 1 p 1319

Employers' Liability and, Apr. 20 p 968

Essential Cost Factor of, Jan. 12 p 121

In Ohio, Feb. 16 p 433

In Seven States, Apr. 6 p 842

Legislation in New Jersey and Ohio,
Apr. 6 p 825

Model Code, Feb. 23 p 498

New York Decision, Mar. 30 p 759

New York Law Void, Mar. 30 p 794

Ohio Law, June 22 p 1539

Workingmen's, Feb. 23 p 499

Complaints of Subordinates, Checking
Unfair, Mar. 16 p 643

Compressor Regulation, Air,* June 22 p
1536

Compressors:
Clayton Motor Driven Air,* Apr. 20 p
975

Contrast in Air,* May 18 p 1216

General Electric Turbine-Driven,*
Mar. 2 p 538

Roberts Motor Air,* Jan. 12 p 164

Concrete Floors, Repairing, Apr. 20, p
987

Concrete Patterns, Experience with, Feb.
9 p 365

Concrete, Pittsburgh Standard Rein-
forcement for, March 23 p 725

Concrete Shafts of Record Size, Jan. 5
p 30

Cone Pulley, Molding, on an Interna-
tional Turn-Over Machine,* May
11 p 1158

Congress of Technology at Boston, Mar.
9 p 592; Mar. 16 p 686; Mar. 30 p
788; Apr. 20 p 967

Connellsville Coal, a Thousand an Acre
for, June 15 p 1447

Connersville Blower Company:
Applied to Vacuum Cleaning,* May 11
p 1166

Rotary Positive Blower,* Jan. 5 p 102

Constitutional Compensation Law, June
1 p 1319

Construction, New Iron and Steel
Works, Jan. 5 p 34

Contracts, Securing Foreign Govern-
ment, May 4 p 1074

Controllers:
Cutler-Hammer Alternating Current
Motor Speed,* Mar. 2 p 549

Cutler-Hammer Reversible Direct-
Current Drum,* June 29 p 1581

Conventions:
American Electrochemical Society,
Mar. 30 p 815

American Foundrymen's Association,
May 25 p 1250; June 1 p 1328

American Institute of Mining En-
gineers, June 22 p 1512

American Iron, Steel & Heavy Hard-
ware Association, June 1 p 1297

American Society of Mechanical En-
gineers, June 1 p 1308; June 8 p
1411*

American Supply and Machinery Man-
ufacturers' Association, Apr. 6 p
840; Apr. 13 p 904

International Master Boilermakers'
Association, June 8 p 1383

National Association of Jobbers of
Wrought Iron Pipe and Fittings,
Mar. 16 p 658; Mar. 23 p 726

National Association of Manufactur-
ers, May 18 p 1182; May 25 p 1258

National Association of Stove Manu-
facturers, May 18 p 1232

National Gas and Gasoline Engine
Trades Association Programme,
Apr. 13 p 927

National Machine Tool Builders' As-
sociation, May 25 p 1252

National Metal Trades Association,
Apr. 13 p 901; Apr. 20 p 976

National Supply and Machinery Deal-
ers' Association, Apr. 6 p 840;
Apr. 13 p 904

Pittsburgh Foundry,* June 1 p 1328

Railway Master Carbuilders' Associa-
tion, June 22 p 1518

Railway Master Mechanics' Associa-
tion, June 22 p 1518

Society for Promotion of Engineering
Education, June 22 p 1530

Southern Supply and Machinery Deal-
ers' Association, Apr. 6 p 840;
Apr. 13 p 904

Steam Engineers, June 15 p 1477

Tariff Commission, Jan. 19 p 207

United Metal Trades Association, Apr.
27 p 1007

Converter with Double Door Bottom,
Tropenas, Apr. 27 p 1018

Conveyor for Handling Kegs,* May 11
p 1165

Cooper, C. & G. Company:
Engine Contracts, Feb. 23 p 502

Co-operation and Government Over-
sight, Trade, Mar. 16 p 642

Co-operation, E. H. Gary on, June 8 p
1408

Copenhagen Polytechnic Plan, Feb. 9 p
349

Copes Boiler Feed Regulator:
Analysis of Boiler Feed Records,*
Jan. 12 p 170

Copper:
African, Jan. 26 p 245

Alaska Copper Coming, Apr. 6 p 823

Conservative Market of 1910, Jan. 12
p 121

Consumption, Jan. 26 p 267

Hardened, Mar. 9 p 589

December Production and Stocks,
Jan. 12 p 147; Production and
Stocks, January, Feb. 16 p 442;
February, Mar. 16 p 666; March,
Apr. 13 p 884; April, May 11 p
1150; May, June 15 p 1462

Trade in 1910, Jan. 5 p 63

World's Production in 1910, Mar. 30
p 815

Core Bench Jolt Rammer,* June 1 p 1340

Core Machines:
Acme,* Jan. 5 p 88

Elmira Roll-Over,* Jan. 5 p 89

Grimes Roll-Over,* Apr. 27 p 1024

Core Room Management and Materials,
Mar. 16 p 664

Core Wash and Parting Compound, Jan.
5 p 117

Cores, Binders for Foundry, May 11 p
1140

Corey, William E.:
Resigns, Jan. 5 p 7

Cork Set in Faces, Pulleys with,* May
11 p 1167

Cornell, J. B. & J. M., Company: Assets Sold, June 15 p 1463

Corporations, Federal Regulation Proposed, Apr. 27 p 1025

Corporations, New Jersey's Governor on, Jan. 19 p 174

Corrosion: And Pitting in Metals, June 15 p 1485 Of a Steel Beam Protected by Terra Cotta and Concrete, Serious,* Feb. 23 p 486 Of Iron, June 8 p 1417 Of Unprotected Steel Work, Feb. 2 p 306 Potassium Chromate as Metal Protection Agent, June 29 p 1579 Sulphur in the Air, June 29 p 1589 Test of Metals, Accelerated, June 29 p 1555

Costs of Producer Gas Plants, Operating, June 29 p 1570

Corse, W. M.: Brass Melting Furnaces, Jan. 5 p 554 Cost Accounting, Shop,* Mar. 2 p 554 Cost of Living, Legislation and a Lower, Feb. 9 p 350 Costs, Distributing Factory Operating,* June 15 p 1479

Covel Mfg. Company: Automatic Circular Metal Saw Sharpener,* Apr. 6 p 866

Cranes: Alliance Foundry,* Jan. 5 p 91 Pawling & Harnischfeger, in a Material Yard,* May 18 p 1214 Shepard Electric Foundry,* Jan. 5 p 95 Special Maris Foundry,* Jan. 5 p 92 Cream City Accident Preventer,* May 4 p 1103

Crescent Forgings Company: New Cresco Monkey Wrench,* Mar. 16 p 679

Crescent Machine Company: Variable Feed Planer,* Jan. 5 p 110 Cresco Monkey Wrench, New,* Mar. 16 p 679

Cresson, George V., Company: In Receiver's Hands, Feb. 16 p 407; Mar. 9 p 607

Crucible Steel Company of America: Buys Midland Steel Company, Feb. 2 p 293 Finances, Apr. 20 p 960 Further Strengthens Its Position, Feb. 24 p 473 Secures Controlling Interest in Halcob Steel Company, Feb. 16 p 406

Crusher, Gardner, Apr. 13 p 927

Cuban Coal Trade, New Vessel for the, Apr. 13 p 929

Cuban Iron Ores, Exploration of,* Apr. 13 p 914

Cupolas: Barry & Zecher Company,* Jan. 5 p 98 Calumet Engineering Works,* Jan. 5 p 97 Mechanical Charging of,* June 8 p 1426 Newton, Northern Engineering Works,* Jan. 5 p 100 Size of Coke Charge for a, June 29 p 1555 Whiting Foundry Equipment Company,* Jan. 5 p 99

Cupror Company: Cupror, Mar. 9 p 589

Curtis & Co. Mfg. Company: Air Hoists,* Jan. 5 p 91

Custer, Edgar A.: Experience with Permanent Molds, June 8 p 1402

Customers, Specialized Seeking for New, Feb. 9 p 349

Customs Decisions: Airtight Metal Cans, Feb. 9 p 371 Automobile Horns, May 18 p 1109 Automobile Parts, May 11 p 1164 Barbers' Hair Clippers, Apr. 6 p 851; May 4 p 1079 Bayonets, Apr. 20 p 949 Cast Iron Statues, Mar. 30 p 774 Chiropodists' Knives, Mar. 9 p 590

Embossing Machines, Jan. 12 p 151 Empty Ammonia Drums, May 4 p 1078 Engravers' Printing Presses, June 1 p 1362 Erasers with Fixed Blades, Feb. 16 p 419 File Testing Machines, Feb. 23 p 461 Forged Iron Ladles, Apr. 20 p 949 Galvanized Steel Wire Rope, Feb. 23 p 461 Hand Brick Presses, Jan. 12 p 151 Ignition Cable, Jan. 5 p 67 Iron Drums or Containers, Feb. 9 p 371 Jute Machinery Parts, May 11 p 1164 Lawn Mowers, June 1 p 1362 Lead Contents of Type Metal, Feb. 9 p 371 Machine Repair Parts, Feb. 9 p 371 Machines for Making Igniters for Miners' Lamps, May 4 p 1078 Mantel or Fireplace Castings, May 18 p 1199 Metal Cans, Mar. 9 p 590 Miners' Rescue Appliances, Mar. 9 p 590 Nut Locks, Apr. 20 p 949 Old Broken Electrotypes, May 4 p 1078 Plow Parts, Jan. 12 p 151 Plumbago Crucibles, Jan. 5 p 67 Rolls for Rolling Mills, Apr. 6 p 851 Sewing Machines, Feb. 16 p 419 Silico-Spiegel, Feb. 23 p 461 Spinning Gears, May 4 p 1079 Steel Railroad Ties, Jan. 12 p 151; Feb. 16 p 419 Vegetable Cutters, Apr. 6 p 851 Cutler-Hammer Mfg. Company: Alternating Current Motor Speed Controllers,* Mar. 2 p 549 New Magnetic Separator,* June 29 p 1581 Reversible Direct-Current Drum Controllers,* June 29 p 1581 Solenoid Operated Valve,* Mar. 16 p 680 Thomas Meter,* Mar. 16 p 676 Unloading Pig Iron with Lifting Magnets,* Apr. 6 p 865

Cutters: Busch Power Sprue,* Feb. 23 p 495 Shuster Sprue,* Jan. 5 p 117 Standard Sprue,* Jan. 5 p 116 Cutting Worm Gear on Gear Hobbing Machine, June 29 p 1573 Cuyuna Iron Range, New Find on the, Feb. 23 p 502 Cuyuna Range, First Ore from the, May 25 p 1258

D.

Dallas Coal, Iron & Steel Company, Jan. 19 p 211

Dalton Adding Machine Company: New Factory, Mar. 9 p 625

Damascus Bronze Company: Copper, Mar. 9 p 606

Dartmouth College: Conference on Scientific Management, May 4 p 1087

Davis-Bourbonville Company: Steel Cutting with the Oxy-Acetylene Torch,* Mar. 9 p 622

Davis, J. C.: Cast Steel Car Wheel,* May 4 p 1090

Davis, W. P., Machine Company: Turret Lathe, 26-in.,* Mar. 30 p 800

Dawson Hardened Copper Company: Hardened Copper, Mar. 9 p 589

Deane Steam Pump Company: Sand Sifters,* Jan. 5 p 111

Dearborn Drug & Chemical Works: Feed Water Treatment Abroad, Jan. 19 p 226

Decision, American Tobacco, June 1 p 1296

Decisions, Application of the Anti-Trust, June 8 p 1378

Decisions of Interest to Manufacturers, Judicial, Jan. 5 p 17; Feb. 2 p 343; Mar. 9 p 595; Mar. 30 p 771; June 22 p 1514

Deere & Co.: Reorganization, Apr. 6 p 851

De Laval Steam Turbine Company: Turbine Reducing Gear,* Apr. 13 p 919

De Leeuw, A. L.: Milling Cutters and Their Efficiency,* May 11 p 1152

Delta and Changeezy Tramrail Trolleys,* Jan. 5 p 93

Depreciation of Unprotected Steel Work, Feb. 2 p 306

"Depreciation," What It Means, Mar. 9 p 572

Des Moines Rapids Hydroelectric Plant, Mar. 30 p 771

Detroit Engine Works: Kerosene Engine,* Apr. 6 p 867

Detroit Foundry Supply Company: Annual Meeting, Feb. 2 p 292

Detroit Steel Products Company: Annual Meeting, Feb. 2 p 292 Fenestra Solid Steel Window Sash, Mar. 16 p 684; Apr. 13 p 929

Detroit Stoker Company: Stoker,* Feb. 9 p 384

Devens, Richard: Mechanical Handling of Materials, Apr. 27 p 1022

Diamond Clamp & Flask Company: Slip-Over Boxes and Bands,* Jan. 5 p 115

Diamond Expansion Bolt Company: Boiler Repair Bolts,* Feb. 9 p 388 Toggle Bolt,* Mar. 9 p 596

Dick, R. & J., Ltd.: Belt Factory at Passaic, N. J., May 18 p 1207

Dickson, Wm. B.: Employers' Liability and Workmen's Compensation, Apr. 20 p 968 Resignation, Mar. 23 p 727

Die-Casting Machine,* Apr. 27 p 1026

Die Head, Landis Solid Adjustable,* Mar. 2 p 556

Die Head, New Self-Opening,* June 1 p 1351

Die Machine, Wiley & Russell Combination Opening,* Mar. 2 p 554

Differdange Steel Works: Calcium Chloride for Drying the Blast,* May 25 p 1270

Diller, H. E.: Foundry Coke, June 22 p 1515

Dille & McGuire Mfg. Company: Expansion, Apr. 6 p 821

Dilworth, Porter & Co., Inc.: General Electric Apparatus, May 4 p 1086

Direct Current of 1500 Volts for a Railroad, June 22 p 1501

Distributing Expense Burden, June 1 p 1325

Distributing Factory Operating Costs,* June 15 p 1479

Dobson, William: Molders' Tools,* Jan. 5 p 117

Dock, New Marquette Ore, Jan. 26 p 284 Docks on the Lakes, Iron Ore,* Apr. 20 p 972

Dodge, James M.: Conservation of Human Effort, Mar. 9 p 588

Dodge Mfg. Company: Quarter Century Club, Feb. 16 p 418 Transmission Rope Splicing,* Apr. 27 p 1032

Doherty Gas Calorimeter,* Apr. 13 p 928

Dominion Steel Corporation: Wire Rod Trade, June 1 p 1317

Donnelly-McArdle Case, Apr. 27 p 1007

Doors, Heating Furnace,* Jan. 12 p 168

Dougherty, John W.: President Pittsburgh Crucible Steel Company, Mar. 2 p 535

Douglass, W. & B.: Contractors' Diaphragm Pump,* Jan. 5 p 53

Dow, George E., Pumping Engine Company: Very Large Triplex Pump,* May 11 p 1164

Dow Wire & Iron Works: Ornamental Castings Made in Permanent Molds,* Jan. 5 p 68

Drafting Room Expense, June 22, p 1500
 Draftsmen, American Society of Engineer, June 1 p 1346
 Drees Machine Tool Company:
 New Vertical Boring Machine,* Apr. 27 p 1025
 Screw Machine, 1-in., Jan. 5 p 39
 Dresser, Frank F.:
 Accidents in Industrial Plants, Jan. 19 p 214
 Drill Table, Morris Swiveling Radial,* Jan. 5 p 49
 Drilling and Reaming Jig, Wood & Spencer,* Mar. 2 p 556
 Drilling Machines:
 All-Geared Multi-Spindle,* Jan. 26 p 268
 Barnes Special Horizontal,* Mar. 9 p 617
 Frontier Heavy Pattern,* June 8 p 1433
 Gang Sensitive Radial,* May 4 p 1102
 Harrington Belt-Driven Flue Sheet,* June 29 p 1572
 Henry & Wright Radial, New,* May 11 p 1159
 Kane & Roach Radial,* May 18 p 1203
 Lamb Portable Electric Radial,* Apr. 6 p 866
 Midland 30-in. Radial,* May 4 p 1108
 Moline Multiple Spindle, New,* Apr. 6 p 855
 Prentiss Ball Bearing, New,* Apr. 27 p 1042
 Reed High Speed Sensitive, New,* May 4 p 1093
 Rockford 14-in., New,* Mar. 30 p 793
 Rockford Positive Geared Feed,* June 15, p 1485
 Sibley Four-Spindle,* June 1 p 1347
 Sibley 24-in. Stationary Head,* May 4 p 1089
 Townsend High-Speed Drill Press,* June 29 p 1580
 Drilling, Milling and Boring Machine, Special Fosdick Horizontal,* May 4 p 1107
 Drive, Motor, Novel Application to Machine Tools,* May 4 p 1088
 Drucklieb Multiple Injector Sand Blast,* Apr. 13 p 923
 Drucklieb Sand Blast Specialties,* Jan 5 p 103
 Dry Air Blast at a British Furnace Plant,* May 11 p 1157
 Dry Air Blast, Results With,* Feb. 2 p 308; Feb. 9 p 368
 Dry Blast Method, New, May 25 p 1236
 Dry Blast Process Tested, New,* June 1 p 1354
 Dryer, Pangborn Ideal Sand,* Jan. 5 p 112
 Drying the Blast, Calcium Chloride for,* May 25 p 1270
 Du Charme Wrench & Novelty Mfg. Company:
 Removal, Mar. 16 p 657
 Dudley, P. H.:
 Elongation and Ductility Rail Tests, April 6 p 839
 Duff Mfg. Company:
 Another Jack Improvement, Jan. 5 p 71
 Jacks at Buenos Aires, Feb. 23 p 494
 Ratchet Jacks at Panama,* Jan. 12 p 167
 Duggan, Thomas R.:
 Treatment and Purification of Boiler Feed Water, Mar. 2 p 533
 Duplex Process at Bethlehem Steel Company's Plant,* Mar. 30 p 784
 Durham Coal & Iron Company, Jan 26 p 249
 Dust Collector, Morse,* Jan. 5 p 101
 Dust Exhausting System, Unusual,* May 18 p 1220
 Dynamiters, Alleged Structural Steel, April 27 p 1005

E.

Edison Electric Illuminating Company:
 Coal Analysis, June 1 p 1317
 Edison Giant Roll Patents Sustained, June 22 p 1520
 Editorials:
 A Thousand an Acre for Connellsville Coal, June 15 p 1447
 Accident Compensation and Conciliation, Apr. 13 p 883
 Accidents and Safeguards in England, Mar. 23 p 703
 Alleged Structural Steel Dynamiters, Apr. 27 p 1005
 America and the Foreign Patent, Mar. 9 p 571
 American Workingman, May 4 p 1055
 Anti-Accident Inspection Service, Feb. 2 p 288
 Anti-Trust Cases, Feb. 23 p 458
 Application of the Anti-Trust Decisions, June 8 p 1378
 Automobile an Economic Good, Jan. 19 p 175
 Awakening to the Danger of Fire, Apr. 13 p 883
 Beating Down Machinery Prices, June 1 p 1206
 Better Outlook for the British Iron Trade, Feb. 16 p 404
 British Insurance Against Unemployment, Feb. 9 p 349
 Business Outlook, June 22 p 1498
 Cast-Iron Car Wheel and the Grinding Machine, Feb. 23 p 459
 Checking Unfair Complaints of Subordinates, Mar. 16 p 643
 Competition Between Rolled and Cast Material, June 1 p 1294
 Concentrated Advisory Board, May 4 p 1055
 Confusion Over Non-Cancellation Clauses, Jan. 5 p 4
 Conservative Copper Market of 1910, Jan 12 p 121
 Copenhagen Polytechnic Plan, Feb. 9 p 349
 Country's Minimum Iron Requirements, May 18 p 1181
 Drafting-Room Expense, June 22 p 1500
 Economic Crime of Increasing Productive Capacity, June 22 p 1498
 Efficiency and Its Broader Application, Mar. 16 p 642
 Efficiency in Railroad Management, Jan. 5 p 3
 Electric Furnace and Electrical Engineering, Feb. 23 p 459
 Engineer in Steel Foundry Practice, Feb. 16 p 405
 English and American Labor Conditions, Apr. 27 p 1005
 Essential Cost Factor of Compensation, Jan. 12 p 121
 First Aid a Ground for Damages, June 29 p 1553
 Foundry Features of This Issue, Jan. 5 p 2
 Freight Rate Decisions, Mar. 2 p 516
 Gary Idea in the International Steel Trade, Feb. 9 p 348
 Geared Turbine and Its Lessons, Apr. 6 p 819
 Government Regulation of Prices, Apr. 20 p 947
 Growing Pre-eminence of the Mesaba Range, Apr. 20 p 946
 Growing Use of the Industrial Automobile, Jan. 12 p 121
 Government Hydraulic Testing Plant, Feb. 2 p 289
 Heavy Section High Carbon Rails, Jan. 26 p 232
 Higher Machine Tool Prices, June 8 p 1380
 Increasing Machinery Exports, Jan. 26 p 233
 Industrial Education Evangelist, Apr. 27 p 1005
 Intensive Production, June 8 p 1379
 Iron and Steel in the World's Railroads, June 29 p 1552
 Judge Gary as a Witness, June 15 p 1446
 Lathe or Turning Machine? June 29 p 1553
 Leaders in Pig Iron Production, Feb. 2 p 289
 Limits of Large Marine Oil Engine Units, Feb. 2 p 289
 Long Life of American Machine Tools, May 4 p 1055
 Machinery Exhibit That Paid, Mar. 9 p 572
 Massachusetts Eight-Hour Bill Invalid, May 25 p 1237
 Metal Frames for Aerial Craft, Apr. 6 p 819
 Navy an Industrial School, Apr. 27 p 1004
 Navy Department Perplexity, Mar. 16 p 644
 New Art in Automobile Building, May 11 p 1124
 New Dry Blast Method, May 25 p 1236
 New Free List, Apr. 20 p 947
 New Jersey's Governor on Corporations, Jan. 19 p 174
 New Metal Perforating Process, Mar. 16 p 643
 New Steel Capacity in Germany and at Home, May 4 p 1054
 New Work for the Efficiency Engineer, Feb. 23 p 459
 New York Machinists' Strike, May 4 p 1054
 New York Workmen's Compensation Decision, Mar. 30 p 759
 Open-Hearth Furnace Capacities, June 22 p 1499
 1910 an Unusual Year in Rails, Feb. 23 p 458
 Noteworthy Anti-Boycott Decision, Jan. 26 p 232
 Novelty in Apprentice Systems, Mar. 9 p 571
 Number of Car Wheels, Apr. 20 p 947
 Official Lists of Machine Tool Builders, Jan. 26 p 234
 Ore Prices and Pig Iron Prices, Mar. 2 p 517
 Our Trade Balance Due to Our Manufacturers, May 25 p 1236
 Perennial Rail Problem, Mar. 30 p 758
 Pig Iron Costs in Alabama, May 11 p 1124
 Price Concessions on Export Trade, May 11 p 1125
 Private Industrial Museums, Jan. 26 p 233
 Proposed Machinery Exposition, June 1 p 1295
 Railroad Educational Bureau, Mar. 9 p 570
 Railroad Securities as Investments, Feb. 16 p 405
 Rate Decisions and Other Price Questions, Mar. 9 p 570
 Readers of *The Iron Age*, Apr. 13 p 882
 Reason in Anti-Trust Cases, May 18 p 1180
 Reciprocity Agreement with Canada, Feb. 2 p 288
 Record Iron and Steel Exports, June 8 p 1378
 Reduction in Lake Iron Ore, Apr. 27 p 1004
 Rods a Finished Steel Product, June 29 p 1553
 Septic Poison's Needless Cost in Works, Jan. 12 p 121
 Specialized Seeking for New Customers, Feb. 9 p 349
 Standard Lengths for Wire Test Pieces, Feb. 23 p 459
 State Control of Women's and Minors' Wages, June 29 p 1554
 Steel Corporation Production, 1901-1910, Feb. 16 p 404
 Steel Corporation's Exports in 1910, Jan. 26 p 233
 Steel Corporation's Output in 1910, Jan. 12 p 120
 Steel Corporation's Production Statement, Mar. 23 p 702

Steel Manufacturers and Prices, Jan. 19 p 174

Tariff Hysterics and Industry, Apr. 27 p 1004

The Outlook, Jan. 5 p 2

To Amend the German Patent Laws, Jan. 12 p 120

Trade Co-operation and Government Oversight, Mar. 16 p 642

Two Influences in Machinery Buying, June 22 p 1499

Underground Shops in South African Mines, Mar. 30 p 759

Unexpected Addition to the Free List, June 1 p 1295

Unreliable Export Agents, Mar. 2 p 517

Wood Preservation and By-Product Coking, Jan. 5 p 3

Workmen Appreciate Technical Publications, Apr. 13 p 884

Works Accident Insurance, Apr. 6 p 818

Education Evangelist, Industrial, Apr. 27 p 1005

Education, Industrial, Feb. 9 p 349

Education, Promotion of Engineering, June 22 p 1530

Edwards & Carpenter:

- Production of Castings to Withstand High Pressures, Jan. 12 p 154
- Efficiency and Its Broader Application, Mar. 16 p 642
- Efficiency Engineer, New Work for the, Feb. 23 p 459
- Efficiency Figures, Skeptic on Some, Apr. 6 p 820
- Efficiency in Shop Operations, Standards of, Jan. 19 p 204
- Efficiency Methods of the Tabor Mfg. Company, Apr. 13 p 902
- Efficiency, Railroad, and Labor Unions, Mar. 23 p 724
- Efficiency, Railroad Repair Shop, Jan. 5 p 31
- Efficiency Specialist, Work of the, Mar. 30 p 760

Ehrhardt & Schmer:

- New Gas Engine,* Jan. 5 p 50
- Electric Controller & Mfg. Company:

 - Magnetic Switch Motor Starters,* Apr. 6 p 847

- Electric Freight Truck, Automatic,* May 11, p 1161

Electric Furnace Company:

- Baily Electric Furnace,* May 4 p 1094

Electric Furnaces:

- See Furnaces, Electric

Electric Iron and Steel in Norway, Feb. 2 p 291

Electric Smelting of Swedish Iron Ore, Feb. 16 p 419

Electric Steel from Basic Pig Iron, Germany Making, Jan. 5 p 39

Electric Steel Production at a German Works, May 4 p 1079; May 11 p 1126

Electric Tool Factory, Modern,* May 4 p 1106

Electrical Apparatus, Life of, Jan. 12 p 122

Electrically Driven Brass Mill,* Jan. 26 p 278

Electrically-Driven Jarring Machine,* June 1 p 1338

Electricity and Fence-Wire Rust, Feb. 9 p 369

Electricity in the Machine Shop,* Jan. 26 p 274

Electricity on a Plantation, Feb. 2 p 328

Electric Furnace Discussion, Jan. 26 p 261

Electrolytic Iron, Jan. 26 p 268

Electrochemical Society, American:

- Convention Programme, Mar. 30 p 815

Electromagnets, Handling Iron Ore with, Feb. 16 p 431

Electroplaters' Association, National, Feb. 16 p 424

Electroplating, Some Unsolved Problems in, Apr. 27 p 1019

Elevator Machine, Speidel Ceiling Electric,* Jan. 12 p 165

Elevators, Ridgway Foundry,* Jan. 5 p 96

Eliminator, Wyoming Automatic,* Apr. 13 p 918

Elmira Foundry Company:

- Roll-Over Core Machine,* Jan. 5 p 89
- Elwell, C. F.:

 - Electric Furnaces of the Induction Type—Costs, Apr. 20 p 961

Emerson, Harrington:

- Standards of Efficiency in Shop Operations, Jan. 19 p 204

Emery & Schwedtman:

- European Methods of Accident Prevention and Relief, Mar. 16 p 667

Emery Testing Machines at the Bureau of Standards, May 4 p 1103

Emery Wheel Hood, Kirk & Blum Adjustable,* Apr. 13 p 933

Emery Wheels, Safety Collars for, Mar. 30 p 804

Emmett Mfg. Company:

- Noyes T Square,* Feb. 9 p 387

Empire Iron & Steel Company:

- Iron Roof Still Good After 40 Years, Mar. 30 p 777

Empire Steel & Iron Company:

- General Electric Turbine-Driven Compressor,* Mar. 2 p 538

Employers' Liability and Compensation Systems, Feb. 23 p 498

Employers' Liability and Workmen's Compensation, Apr. 20 p 968

Employers' Liability in New York State, May 11 p 1126

Employers' Liability Insurance—Metal Trades, Apr. 13 p 912

Employers' Responsibilities, Apr. 13 p 930

Employment Bureau of Pittsburgh Manufacturers' Association, Mar. 9 p 575

Engineer as a Salesman, Jan. 19 p 200

Engineer in Steel Foundry Practice, Feb. 16 p 405

Engineer, Mechanical, and Prevention of Accidents,* Feb. 16 p 434

Engineering in the Foundry, Progress of Mechanical,* Jan. 5 p 76; Jan. 12 p 147

Engineering Education, Promotion of, June 22 p 1530

Engineers, American Society of Mechanical:

- Convention, June 1 p 1308; June 8 p 1411

Engineers' Association, Chicago Commercial, May 4 p 1121

Engineers' Club's Exhibition, Brooklyn, May 4 p 1076

Engineers' Convention, Steam, June 15 p 1477

Engineers' Meeting, Joint Electrical and Mechanical, Feb. 23 p 501

Engineers, Mining:

- (See American Institute of)

Engineers' Programme, Mechanical, May 4 p 1078

Engineers' Spring Meeting, Mechanical, Mar. 2 p 545

Engines:

- Detroit Kerosene,* Apr. 6 p 867
- Ehrhardt & Schmer Gas, New,* Jan. 5 p 50
- Gas Producer-Gas Engine Plants,* Mar. 16 p 682
- General Electric Blowing, Feb. 9 p 375
- Herrick Rotary Tests, Jan. 5 p 71.
- Limits of Large Marine Oil Units, Feb. 2 p 289
- Mesta Blowing, Rapid Construction of, Mar. 23 p 738
- Southwark Reversing Convertible Simple or Compound,* Apr. 13 p 930
- Svea Caloric Test,* Jan. 5 p 33

Engines, Blowing:

- Future in Practice, June 16 p 1463

Ensley Furnaces, Remarkable Records at, May 11 p 1165

Ensley Rail Mill Closed Down, May 4 p 1071

Enterprise Foundry & Machine Company:

- Asa W. Whitney Car Wheels, Mar. 23 p 716

Epwright, A. W.:

- New Pennsylvania Railroad Track Scale,* Apr. 13 p 924

Equipment, New Railroad, Jan. 12 p 146; Jan. 19 p 202; Jan. 26 p 279; Feb. 2 p 292; Feb. 9 p 368; Feb. 16 p 431; Feb. 23 p 485; Mar. 2 p 534; Mar. 16 p 660; Mar. 23 p 735; Mar. 30 p 776; Apr. 13 p 900; Apr. 20 p 974; May 4 p 1093; May 11 p 1156; May 18 p 1197; June 1 p 1341; June 8 p 1433

Equipment, Selection of Factory, May 18 p 1196

Erie Canal Terminals on Lake Erie, Apr. 27 p 1021

Erie Railroad Company:

- Ore Docks in Cleveland, Mar. 23 p 729
- Essex-Merrimac Chain Bridge, May 4 p 1075

Eureka Snap Flask, New,* Jan. 5 p 116

Europe, American Machinery in, May 18 p 1198; June 15 p 1481

Europe, Workmen's Insurance in, Mar. 9 p 592

European Methods of Accident Prevention and Relief, Mar. 16 p 667

European Steel Syndicates, Jan. 26 p 273

Evangelist, Industrial Education, Apr. 27 p 1005

Exeter Machine Works:

- Economy Tests of a Turbine-Driven Furnace Blower, May 4 p 1070
- Exhausting System, Unusual Dust,* May 18 p 1220

Exhibits, Atlantic City Railway Convention, June 22 p 1518

Exhibit That Paid, Machinery, Mar. 9 p 572

Exhibitions:

- Brooklyn Engineers' Club's, May 4 p 1076
- First West Siberian, Feb. 2 p 312
- Machine Tool Awards at Brussels, Feb. 16 p 424
- Municipal, Chicago, Jan. 5 p 82
- National Building Material, May 18 p 1213
- Pratt Institute, May 25 p 1269
- Proposed Machinery, June 1 p 1295
- Turin International, May 4 p 1071

Expense Bureau, Distributing, June 1 p 1325

Export Agents, Unreliable, Mar. 2 p 517

Export Assisting Plant, May 25 p 1260

Export Association, American Manufacturers, Mar. 2 p 519

Export Methods, American, Apr. 27 p 1021

Exports and Imports of Iron and Steel in 1910, Feb. 9 p 376

Exports and Imports of Iron and Steel, Monthly, November, Jan. 12 p 158; January, Mar. 9 p 594; February, Mar. 30 p 779; March, May 4 p 1086; April, June 8 p 1401.

Exports in 1910, Steel Corporation's, Jan. 26 p 233

Exports Increase Heavily, Feb. 23 p. 491

Exports, Increasing Machinery, Jan 26 p 233

Exports, Record Iron and Steel, June 8 p 1378

Extras in the Eastern Jobbing Trade, Question of, April 27 p 1007

Extras on Bars and Shapes from Waverly Warehouse, May 11 p 1143

Export Trade, Price Concessions on, May 11 p 1125

F.

Factory Equipment, Selection of, May 18 p 1106

Faeth Iron Company:

- Enlargement, Feb. 9 p 401

Fafnir Bearing Company, Mar. 16 p 684

Failures, Steel Rail,* Mar. 30 p 780

Fans:
 Buffalo New Type Slow Speed Exhaust,* June 29 p 1571
 Buffalo, 30 Ft. High,* May 18 p 1203
 Special Massachusetts Drives,* Apr. 13 p 932
 Ventura Disk,* May 18 p 1222
 Farrell, James A.:
 Our Trade with Latin-America, Feb. 16 p 422
 Steel Corporation President,* Jan. 12 p 123
 Farrell, Kemp & Gushe Company, Feb. 16, p 419
 Farwell Squeezing Molding Machine,* Jan. 5 p 83
 Federal Immigration Commission:
 Labor Conditions in Iron Mining, Feb. 2 p 326
 Fenestra Solid Steel Window Sash, Mar. 16 p 684
 Ferracut Machine Company:
 Labor-Saving Staybolt Press,* May 25 p 1266
 Small Punching and Riveting Press,* Mar. 16 p 685
 Ferro Machine & Foundry Company:
 Improvements, Mar. 9 p 575
 Ferromanganese in Car Wheel Iron, Mar. 16 p 644
 Ferromanganese in Chilled Cast Iron Wheels, Apr. 6 p 820
 Ferrosilicon Imports to the United States, Mar. 2 p 535
 Ferrosilicon Syndicate, Jan. 19 p 176
 Ferrotitanium Rails, New York Central, Feb. 2 p 292
 Filtration for Industrial Purposes, Water, Jan. 26 p 271
 Findlay Motor Company:
 Important Commercial Automobile Consolidation, Mar. 30 p 777
 Fire, Awakening to the Danger of, Apr. 13, p 883
 Fire, Safeguarding Against, Apr. 20 p 948
 Firth-Sterling Steel Company:
 Handbook, Apr. 27 p 1038
 Poster, Apr. 6 p 837
 Flanders Mfg. Company, Jan. 26 p 284
 Flask, New Eureka Snap,* Jan. 5 p 116
 Flask Pin Holes, Standardizing,* Jan. 26 p 234
 Flasks, Sterling,* Jan. 5 p 115
 Floor Failure, Story of a,* Feb. 23 p 486
 Floors, Repairing Concrete, Apr. 20 p 987
 Floors, Shop,* Feb. 9 p 378; Feb. 16 p 426
 Flue Cleaner, Baker Hammer,* May 25 p 1274
 Fluorspar in 1909, Production of, Mar. 30 p 799
 Fluter, New Automatic Tap,* May 25 p 1281
 Flywheel, Large High Speed,* Feb. 16 p 431
 Foreign Government Contracts, Securing, May 4 p 1074
 Foreign Trade Makes a New Record, Our, Jan. 19 p 203
 Foremen's Club, Cincinnati, Mar. 16 p 657
 Forging and Bending Press, Haniel & Leug Steam-Hydraulic,* Jan. 5 p 48
 Forging Machine, Huge Ajax,* Mar. 30 p 800
 Forging Press, Steam-Hydraulic,* June 15 p 1471
 Forging with a High Speed Hydraulic Press,* Jan. 26 p 282
 Fosdick Machine Tool Company:
 Special Horizontal Boring, Drilling and Milling Machine,* May 4 p 1107
 Foster, Walter H., Company:
 All-Geared Multi-Spindle Drill,* Jan. 26 p 268
 Foundry:
 Atlas Cars,* Jan. 5 p 92
 Binders for Cores, May 11 p 1140
 Brass Melting Furnaces, Jan. 5 p 82
 Columbia Steel,* Jan. 12 p 160
 Conditions in the Trade, Mar. 23 p 728
 Continuous Operation, Jan. 5 p 76*;
 Jan. 12 p 147
 Demand for Broad Training, Feb. 2 p 311
 Ernst Wiener Cars,* Jan. 5 p 97
 Efficiency in the, June 8 p 1395
 Engineer in Steel Practice, Feb. 16 p 405
 Exhibits at the Pittsburgh Convention, June 1 p 1334
 Features of a Modern Steel,* Apr. 6 p 852
 Green Blowers,* Mar. 9 p 621
 Handling Sand,* June 8 p 1422
 Hart-Parr Company's New, Apr. 13 p 906
 Modern Equipment,* Jan. 5 p 83
 Pawling & Harnischfeger Grab Bucket,* Jan. 5 p 90
 Progress in Heated Mixers, June 1 p 1349
 Progress of Mechanical Engineering in, Jan. 5 p 76*; Jan. 12 p 147
 Quaker City Supply Exhibit, Feb. 2 p 318
 Recent Tendencies in the Industry, Jan. 5 p 66
 Sound Business Methods in, Jan. 5 p 74
 Steel Practice, Mar. 30 p 778
 Sturtevant Blowers,* Jan. 5 p 101
 Very Complete Trolley System,* Feb. 23 p 493
 Foundry Conventions, Pittsburgh,* May 25 p 1250; June 1 p 1328
 Foundry Foremen:
 Chicago, Jan. 26 p 249; Feb. 16 p 407
 Cincinnati, May 4 p 1085
 Philadelphia, Feb. 16 p 406; Mar. 16 p 658; May 11 p 1127; June 22 p 1501
 St. Louis, Jan. 19 p 176
 Foundrymen Report on Pig Iron Stocks and the Outlook, Mar. 9 p 594
 Foundrymen's Associations:
 American—
 Announcements, Mar. 30 p 794; Apr. 13 p 903; May 18 p 1197
 Convention Proceedings, May 25 p 1250; June 1 p 1328
 Newark, N. J., Jan. 12 p 155; Feb. 9 p 366; Apr. 13 p 884; May 11 p 1157; June 15 p 1480
 New England, Jan. 19 p 203; Feb. 16 p 445
 Philadelphia, Jan. 12 p 155; Feb. 9 p 386; Mar. 9 p 588; Apr. 13 p 918; May 11 p 1149; June 15 p 1404*
 Pittsburgh, Jan. 12 p 155; Mar. 9 p 573; Apr. 6 p 821; May 4 p 1083; June 15 p 1462
 Programme of German, May 18 p 1213
 Fowler, Samuel B.:
 Mechanical Handling of Freight, Jan. 5 p 33
 Free List, Unexpected Addition to the, June 1 p 1295
 Freight Cars Idle, Fewer, June 8 p 1429
 Freight, Mechanical Handling of, Jan. 5 p 33
 Freight Rates:
 Buffalo Coke Rate Hearing, Apr. 13 p 901
 Connellsville Coke Interests and Railroad Discrimination, Mar. 2 p 519
 Decisions and Price Questions, Mar. 9 p 570
 Decisions by Interstate Commerce Commission, Mar. 2 p 516
 New Coke Rates, Apr. 6 p 838
 Railroad Rebates on Iron Ore, May 4 p 1100
 Railroad Shippers' Service, May 11 p 1151
 Story of the Hearing, Mar. 23 p 717
 Suit to Test the 80-Cent Ore Rate in Minnesota, Jan. 26 p 284
 Frick, H. C., Coke Company:
 Safety Committee, May 18 p 1216
 Will Not Reduce Wages, Feb. 2 p 303
 Friend and Brown:
 Potassium Chromate as Metal Protection Agent, June 29 p 1579
 Frontier Iron Works:
 Heavy Pattern Drill Press,* June 8 p 1433
 Fuel Efficiency of the Blast Furnace, June 29 p 1554
 Fuel Handling on the Chelsea Piers,* Feb. 23 p 497
 Fume Removing Devices, Obermann Acid,* Mar. 16 p 667
 Furnaces:
 Brass Melting, Jan. 5 p 82
 Calculation of Air Furnace Dimensions, May 25 p 1257
 Heating Furnace Doors,* Jan. 12 p 168
 M. R. V. Brass Melting,* Feb. 9 p 388
 Oil Fuel for Air Furnaces, June 15 p 1465
 Furnaces, Blast:
 And Coke Oven Gases, May 18 p 1194
 Calcium Chloride for Drying Blast,* May 25 p 1270
 Data for Piping,* Mar. 23 p 740
 Dry Air Blast at a British Furnace Plant,* May 11 p 1157
 Eastern Wage Reductions, Jan. 19 p 227
 Fuel Efficiency, June 29 p 1554
 Inland Steel Company Will Build Another, Feb. 23 p 460
 Monthly Statement,* Jan. 5 p 6; Feb. 9 p 352; Mar. 9 p 574; Apr. 6 p 822; May 4 p 1058; June 8 p 1382
 New Charcoal, May 4 p 1069
 New Dry Blast Process Tested,* June 1 p 1354
 Problem of Efficiency, Jan. 5 p 5
 Remarkable Records at Ensley, May 11 p 1165
 Results with Dry Air, Feb. 2 p 308*; Feb. 9 p 368
 Rifle Shots Open a Chilled Cinder Notch, Feb. 2 p 311
 Study of, June 8 p 1429
 Utilizing Wastes, June 8 p 1397
 Furnaces, Electric:
 And Electrical Engineering, Feb. 23 p 459
 Baily,* May 4 p 1094
 Girod Progress, Jan. 19 p 225
 Heroult 15-Ton, at South Chicago,* Jan. 26 p 262
 Induction Type—Costs, April 20 p 961
 New Hering,* June 15 p 1464
 Power Requirements of, Feb. 2 p 322
 Reliability of, Jan. 26 p 266
 Furnaces, Open Hearth:
 Capacities, June 22 p 1499
 Large Basic, Jan. 19 p 201
 Use of Coke-Oven Gas in, Feb. 2 p 318; May 18 p 1232; June 22 p 1501
 With Magnesite End Blocks, Mar. 23 p 716
 G.
 Gale, C. H.:
 Titanium for Malleable Iron, June 1 p 1323
 Gang, William E., Company:
 Sensitive Radial Drill,* May 4 p 1102
 Ganschow, William, Company:
 Cut Gear Exhibition, Feb. 23 p 473
 Gardner Crusher Company:
 Crusher,* Apr. 13 p 927
 Gardner General Foundry Company:
 Six-Wheel Grinder,* Mar. 16 p 674
 Gardner Machine Company:
 Patternmaker's Disk Grinder,* Jan. 5 p 108
 Garrett & Amberg Company:
 Forming Special Shapes by Cold Rolling of Standard Sections,* May 18 p 1215
 Garrigus Machine Company:
 Surface Grinder,* June 29 p 1578
 Garrison, A., Foundry Company:
 Double-Acting Press, 400-Ton,* Jan. 12 p 159
 Garvin Machine Company:
 Automatic Chuck,* Mar. 9 p 626
 Gary, E. H.:
 As a Witness, June 15 p 1446
 Co-operation, June 8 p 1408

Dinner to Steel Manufacturers, Jan. 19 p 208; May 11 p 1144

Idea in the International Steel Trade, Feb. 9 p 348

Testimony at Steel Corporation Investigation, June 8 p 1404; June 15 p 1466

Gary, Ind.:

- Five New Merchant Mills,* Mar. 9 p 597
- Suggestive Anti-Accident Epigram, Apr. 27 p 1035
- Universal Plate Mill, 60-in.,* June 22 p 1526

Gary Screw & Bolt Company:

- New Plant, Feb. 9 p 373
- Gas Cavities and Shot-in Iron Castings,* June 1 p 1339
- Gas, Coke-Oven, in Open-Hearth Furnaces, Use of, Feb. 2 p 318; May 18 p 1232; June 22 p 1501
- Gas Engines (See Engines)
- Gas Plants for Bituminous Coals, Holbeck,* May 18 p 1217
- Gas Plants, Operating Costs of Producer, June 29 p 1570
- Gases, Blast Furnace and Coke Oven, May 18 p 1194
- Gas, Essential Factors in the Formation of Producer, May 4 p 1071
- Gas in 1909 and 1910, Natural, Feb. 16 p 437
- Gas Producers:

 - Experiments, Mar. 30 p 792
 - Gas Engine Plants,* Mar. 16 p 682
 - Hilger Revolving Grate,* Mar. 3 p 537
 - Küppers,* June 22 p 1534
 - Gaskets, Triple and Trinity,* Jan. 19 p 222

- Gates, John W.:

 - Testimony at Steel Corporation Investigation, June 1 p 1309; June 8 p 1406

- Gauge, wood & Spencer Adjustable Snap Thread,* Mar. 9 p 621
- Gayley, James:

 - Results with Dry Air Blast, Feb. 2 p 308*; Feb. 9 p 368
 - Story of a Grain of Iron, May 4 p 1097
 - Testimony at Steel Corporation Investigation, June 15 p 1470; June 22 p 1532

- Gear Cutters:

 - New Gould & Eberhardt,* Feb. 2 p 325
 - No. 5 Cincinnati,* Apr. 27 p 1039

- Gear, De Laval Steam Turbine Reducing,* Apr. 13 p 919
- Gear Exhibition, Ganschow Cut, Feb. 23 p 473
- Gear, Harris Transmission,* May 18 p 1212
- Gear Hobbing Machine, Cutting Worm Gear on, June 29 p 1573
- Gear Pattern Cutter, Newark,* Feb. 2 p 319
- Gears, Cutting Worm, with a Fly Cutter,* May 25 p 1268
- General Electric Company:

 - Annual Report, Apr. 27 p 1006
 - Apparatus for Dilworth, Porter & Co., Inc., May 4 p 1086
 - Blowing Engine, Feb. 9 p 375
 - Bonds. May 11 p 1166
 - Electric Locomotive, 35-Ton, June 22 p 1515
 - Interesting Curtis Turbine Installation,* Feb. 23 p 492
 - New Indicating Boiler Flow Meter, June 22 p 1531
 - Turbine-Driven Compressor,* Mar. 2 p 538

- General Fire Extinguisher Company:

 - Handling Sand in the Foundry,* June 8 p 1422

- Generators:

 - New Westinghouse Interpole Direct Current,* Apr. 27 p 1037
 - Westinghouse Type E Alternating Current,* Feb. 9 p 377

- Gerdau, Barthold:

 - Visits This Country, June 1 p 1350

Germany:

 - American Association of Commerce and Trade, Berlin, Apr. 27 p 1040
 - Ardelt, R., & Sons Cast Iron Pipe Molding,* May 4 p 1098
 - Automobiles, Depreciation and Repair Cost, May 11 p 1151
 - Blast Furnace and Coke Oven Gases, May 18 p 1194
 - Calcium Chloride for Drying the Blast at Differdange Steel Works,* May 25 p 1270
 - Iron Market (See Proper Heading Under Trade Reports Each Week)
 - Iron Ore Production in 1910, Apr. 20 p 992; Apr. 27 p 1023
 - Küppers Gas Producer,* June 22 p 1534
 - Le Gallais, Metz & Cie Electric Steel Production, May 4 p 1079; May 11 p 1126
 - Machine Tools, Feb. 23 p 501
 - Making Electric Steel from Basic Pig Iron, Jan. 5 p 39
 - New Ehrhardt & Schmer Gas Engine,* Jan. 5 p 50
 - New Steel Capacity in Germany and at Home, May 4 p 1054
 - Programme of Foundrymen's Association, May 18 p 1213
 - Steel Production in 1910, Apr. 13 p 911
 - Steel Shipments Slightly Less, Mar. 2 p 531
 - Steel Trade Problems, Apr. 13 p 920
 - To Amend the Patent Laws, Jan. 12 p 120

Gerstle, William L.:

 - What Union Labor Is Doing for San Francisco, Feb. 16 p 420

Geuder, Paeschke & Frey Company:

 - Cream City Accident Preventor,* May 4 p 1103

Gillette, George M.:

 - Accident Compensation in Minnesota, Mar. 2 p 551
 - Industrial Accident Inspection and Prevention, Mar. 30 p 760

Girder:

 - Carting a 60-ton, Mar. 9 p 572
 - New York City's Largest, Mar. 23 p 716

Girod Electric Furnace Progress, Jan. 19 p 225

Globe Malleable Iron Company:

 - Sly Tumbling Mills,* Jan. 5 p 104

Gobille, Joseph Leon:

 - Experience with Concrete Patterns, Feb. 9 p 365

Gore Wire Rope,* Apr. 20 p 975

Gould & Eberhardt:

 - New Gear Cutter,* Feb. 2 p 325

Goulds Mfg. Company:

 - Chilean Buyers in New York, May 11 p 1150
 - Efficiency of Coney Island Fire Pumps, June 15, p 1462
 - Enlarged Plant, June 8 p 1410

Government Contracts, Securing Foreign, May 4 p 1074

Government Regulation of Prices, Apr. 20 p 947

Grab Bucket, Pawling & Harnischfeger Foundry,* Jan. 5 p 90

Grain of Iron, Story of a, May 4 p 1097

Grant Mfg. & Machine Company:

 - Multiple Spindle Rivet Spinner,* Jan. 26 p 279

Great Britain:

 - Accidents and Safeguards, Mar. 23 p 703
 - Better Outlook for the Iron Trade, Feb. 16 p 404
 - British Interests Acquire Brazilian Iron Mines, Jan. 26 p 234
 - Dry Air Blast at a Furnace Plant,* May 11 p 1157
 - Howell & Co., Ltd., Super-Vitrite High Speed Steel, Jan. 26 p 282
 - Insurance Against Unemployment, Feb. 9 p 349
 - Iron and Steel Institute—Annual Meeting Programme, Apr. 20 p 980

Iron Market, Jan. 5 p 29; Mar. 16 p 661; Apr. 13 p 901

Pig Iron Output, First Half of 1910, Jan. 12 p 122

Pig Iron Production in 1910, May 25 p 1257

Specifications for Cold-Drawn Weldless Steel Tubes, Apr. 27 p 1024

Steel Companies Not Prosperous in 1910, Mar. 16 p 658

Steel Production in 1910, June 29 p 1555

Unemployment Insurance, May 4 p 1072

Welsh Tin Plate Trade, Jan. 12 p 157

Great Lakes Engineering Works:

 - Two 617-Ft. Ore Vessels Ordered, Feb. 9 p 374

Great Northern Iron Ore Properties:

 - Annual Report, Mar. 23 p 725
 - Ore Mining on, June 29, p 1569

Gregg Mfg. Company:

 - Oscillating Sand Sifter,* June 22 p 1525

Grieves, W. A.:

 - Mutuality, Apr. 13 p 908

Griffith, D. M.:

 - Algoma Steel Company's Coke Plant,* Apr. 20 p 982

Grinding Machines:

 - Bath Duplex Internal,* Mar. 23 p 736
 - Bridgeport Motor-Driven, No. $\frac{1}{2}$,* Mar. 30 p 803
 - Cleveland Portable Pneumatic,* Jan. 12 p 162
 - Gardner Patternmaker's Disk,* Jan. 5 p 108
 - Gardner Six-Wheel,* Mar. 16 p 674
 - Garrigus Surface,* June 29 p 1578
 - North Wales 8-In. Head,* Feb. 9 p 386
 - Pratt & Whitney Automatic Cylindrical Sizing,* Jan. 5 p 54
 - Springfield Dry, New,* Mar. 23 p 743
 - Swinging Frame,* June 1 p 1341

Grinding Car Wheels Without Removing Them, Mar. 9 p 620

Grinding Machine and the Cast Iron Car Wheel, Feb. 23 p 459

Gröndal Iron Ore Briquetting Plant, Mar. 9 p 594

Growth in Castings, White Irons and the Prevention of, Mar. 23 p 744

Growth of Cast Iron, June 1 p 1327

Guggenheim, Daniel:

 - Copper Consumption, Jan. 26 p 267

H.

Hagan, George J.:

 - American Rolling Mill Equipment of Furnaces, Mar. 9 p 606

Hagar, Edward M.:

 - Utilizing Blast Furnace Wastes, June 8 p 1397

Halcomb Steel Company:

 - Crucible Steel Company of America Secures Controlling Interest, Feb. 16 p 406

Hammer of the Helve Type, New Welch,* May 25 p 1273

Hammers, Pneumatic:

 - Cleveland,* Jan. 5 p 107
 - Pittsburgh Chipping,* Jan. 5 p 106

Handling of Materials, Mechanical, Apr. 27 p 1022

Handy Slitting Shear,* Apr. 6 p 866

Haniel & Lueg:

 - Steam-Hydraulic Forging and Bending Press,* Jan. 5 p 48

Hanna Engineering Works:

 - Sand Sifters,* Jan. 5 p 110

Hansell, N. V.:

 - Iron Mining Beyond the Arctic Circle,* Mar. 9 p 608

Harbison-Walker Refractories Company:

 - Study of the Blast Furnace, June 8 p 1429

Hardness of Quenched Tool Steels,* May 25 p 1256

Harrington, Edwin, Son & Co., Inc.:
Belt-Driven Flue Sheet Drill,* June 29 p 1572
Extension Lathe,* Feb. 23 p 481

Harrington, Robinson & Co.:
Steel of Great Torsional Strength,* June 29 p 1575

Harris Transmission Gear,* May 18 p 1212

Hart, H. C., Mfg. Company:
Hollow Cap Screw,* Feb. 9 p 389

Hart-Parr Company:
New Foundry, Apr. 13 p 906

Haskell & Barker Car Company:
Steel Car Plant, May 11 p 1127

Hauke Mfg. Company:
Oil Fuel Burners in the Foundry, June 1 p 1346
Portable Oil Burners,* Jan. 5 p 98

Havana Coal Company:
New Vessel for the Cuban Coal Trade, Apr. 13 p 929

Hayti, National Railway of, May 4 p 1086

Heating, Bates Improvement in Feed Water,* June 29 p 1592

Hecksher, Richard & Sons Company:
Special Bridge for Ladle Cars,* April 27 p 1031

Heinle Company:
New Method of Making Square Tubing,* June 29 p 1587

Henneberry Company:
Suggestions Wanted for Catalogues, Mar. 2 p 519

Henry & Wright Mfg. Company:
New Radial Drilling Machine,* May 11 p 1159

Herms, Edward:
Steel Foundry Practice, Mar. 30 p 778

Hering, Carl:
New Electric Furnace,* June 15 p 1464

Heroult Furnace at South Chicago, 15-Ton,* Jan. 26 p 262

Herrick Engine Company:
Rotary Engine Tests, Jan. 5 p 71

Hesse, G. Emil:
Svea Caloric Engine Test,* Jan. 5 p 33

Hess Steel Castings Company:
New Foundry, May 11 p 1127

Hickey, Michael J.:
Value of System, Jan. 12 p 121

Hickman, Williams & Co.:
Conditions in the Foundry Industry, Mar. 2 p 533

Foundrymen Report on Pig Iron Stocks and the Outlook, Mar. 9 p 594

High Pressure Sand Blast Company:
Kelly High Pressure Sand Blast,* Jan. 5 p 106

High Speed Steel, Super-Vitrite, Jan. 26 p 282

Hilger Revolving Grate Gas Producer,* Mar. 2 p 537

Hill Clutch Company:
Rolling Mill Bearing,* Jan. 5 p 49

Hill, W. W.:
Rail Fastener for Steel Ties,* June 29 p 1591

Hisey-Wolf Machine Company:
Modern Electric Tool Factory,* May 4 p 1106

Hogaboom, George B.:
Some Unsolved Problems in Electro-plating, Apr. 27 p 1019

Hoists:
Climax Spur Geared Chain,* Apr. 6 p 860
Curtis Air,* Jan. 5 p 91

For Foundry and Shop, Mar. 23 p 741

Monorail Grab Bucket Coal,* Mar. 2 p 550

Yale & Towne Mfg. Company,* Jan. 5 p 94

Holbeck-Riverside Gas Power Company:
Gas Plants for Bituminous Coals,* May 18 p 1217

Holt, J. C.:
Ferromanganese in Chilled Cast Iron Wheels, Apr. 6 p 820

Hood, Kirk & Blum Adjustable Emery,* Apr. 13 p 933

Hooper-Falkenau Engineering Company:
Announcement, Apr. 20 p 986
Continuous Pouring Spout,* May 25 p 1267

Hooper, George K.:
Progress of Mechanical Engineering in the Foundry,* Jan. 5 p 70; Jan. 12 p 147

Housing Problems to be Considered, City, June 1 p 1355

Howard, George M.:
Storage Batteries, Feb. 23 p 474

Howell & Co., Ltd.:
Super-Vitrite High Speed Steel, Jan. 26 p 282

Hughes, Charles H.:
Raising the Battleship Maine,* June 8 p 1430

Hulbert, William R.:
Thermits, June 22 p 1538

Hungerford, Churchill:
Water Filtration for Industrial Purposes, Jan. 26 p 271

Hydraulic Machine Company:
Plant Purchased by R. D. Nuttall Company, Mar. 16 p 658

Hydraulic Testing Plant, Government, Feb. 2 p 289

I.

Ideal Sand Dryer, Pangborn,* Jan. 5 p 112

Illinois Steel Company:
Heroult Furnace, 15-Ton,* Jan. 26 p 262
New Structural Mill,* June 15 p 1472

Immigrant Workmen, Our, Feb. 23 p 478

Immigration, Recent, Apr. 13 p 898

Imports and Exports of Iron and Steel:
November, Jan. 12 p 158; December, Feb. 9 p 376; January, Mar. 9 p 594; February, Mar. 30 p 779; March, May 4 p 1086; April, June 8 p 1401

Imports, Ferrosilicon, to the United States, Mar. 2 p 535

Improved Equipment Company:
Doherty Gas Calorimeter,* Apr. 13 p 928

Impurities in Steel, "Building Up," Feb. 23 p 480; Mar. 2 p 537

Indiana Steel Company:
Five New Merchant Mills at Gary,* Mar. 9 p 597
Suggestive Anti-Accident Epigram,* Apr. 27 p 1035

Indianapolis Elbow Company:
Handy Slitting Shear,* Apr. 6 p 866

Indianapolis Industrial Suburb, New, Mar. 2 p 554

Indiana Steel Company:
Five New Merchant Mills,* Mar. 9 p 597
Suggestive Anti-Accident Epigram, Apr. 27 p 1035
Universal Plate Mill, 60-In.,* June 22 p 1526

Induction Type Electric Furnaces—Costs, Apr. 20 p 961

Industrial Operation, Scientific, Apr. 13 p 922

Industrial Safety Association, Mar. 9 p 587

Industrial Works:
Catalogue, June 15 p 1464
Infallible Man, The, May 18 p 1195

Ingersoll-Rand Company:
Cameron Pump Alliance, Jan. 19 p 222

Ingot Treatment, Steel,* May 25 p 1262

Inland Steel Company:
Will Build Another Blast Furnace, Feb. 23 p 460

Inspection Service, Anti-Accident, Feb. 2 p 288

Inspection System to Prevent Industrial Accidents, Feb. 2 p 290

Insurance:
Against Unemployment, British, Feb. 9 p 349

Employers' Liability—Metal Trades, Apr. 13 p 912

In Europe, Workman's, Mar. 9 p 592

In Great Britain, Unemployment, May 4 p 1072

Italian Workmen's Prizes, Mar. 16 p 685

Works Accident, Apr. 6 p 818

International Acheson Graphite Company:
Lubricants, Apr. 13 p 931

International Association for Testing Materials, Mar. 9 p 590

International Conference, Brussels, June 22 p 1501

International Harvester Company:
Annual Report, May 4 p 1069
Another Ore-Washing Plant in Minnesota, June 29 p 1567
Expansion, Feb. 9 p 372
Tractor Works,* June 29 p 1582

International Iron and Steel Conference, Feb. 23 p 471

International Machine Tool Company:
Libby 18-In. Turret Lathe,* Apr. 27 p 1034

International Master Boilermakers' Association Convention, June 8 p 1383

International Molding Machine Company:
Announcement, Mar. 23 p 728
Molding a Cone Pulley,* May 11 p 1158
Mower Part Molding Machines,* June 15 p 1484

International Steel Trade, Gary Idea in the, Feb. 9 p 348

Iron:
Corrosion of, June 8 p 1417
Electrolytic, Jan. 26 p 268
Growth of Cast, June 1 p 1327
Mining Beyond the Arctic Circle,* Mar. 9 p 608
Story of a Grain of, May 4 p 1097
Vanadium in Cast, June 8 p 1308
White, and the Prevention of Growth in Castings, Mar. 23 p 744

Iron and Steel Institute:
Annual Meeting Programme, Apr. 20 p 980

Iron and Steel Institute, American:
Officers, June 1 p 1297

Iron and Steel Production for Twenty-five Years,* Jan. 19 p 206

Iron and Steel, Titanium in, June 1 p 1322

Iron and Steel Works Construction, New, Jan. 5 p 34

Iron Castings, Gas Cavities and Shot in,* June 1 p 1339

Iron City Spring Company:
New Plant, Jan. 19 p 176

Iron Ore:
(See Lake Superior)
Belgian Supplies of, May 18 p 1202
Briquettes, Feb. 9 p 374
Electric Smelting of Swedish, Feb. 16 p 419
Handling with Electromagnets, Feb. 16 p 431
Production in 1909 and 1910, Jan. 26 p 284
Production in 1910, German, Apr. 27 p 1023
Railroad Rebates on, May 4 p 1100
Receipts at Lake Michigan Ports, Feb. 2 p 323
Reserves Underestimated, May 4 p 1080
Exploration of Cuban,* Apr. 13 p 914

Iron, Steel & Heavy Hardware Association, American:
Convention, June 1 p 1297

Isolated Plant Protective Association, Jan. 19 p 201

Itabira Iron Mines in Brazil, Apr. 27 p 1007

Italian Workmen's Insurance Prizes, Mar. 16 p 685

Italy's Greatest Steel Plant, Mar. 30 p 761

J.

Jackman, E. S., & Co.:
Firth-Sterling Steel Poster, Apr. 6 p 837

Jacks:
Another Duff Improvement, Jan. 5 p 71

Duff Ratchet at Panama,* Jan. 12 p 167

Jackson, William B.:
What "Depreciation" Means, Mar. 9 p 572

Jameson, A. H.:
"Building Up" Impurities in Steel, Feb. 23 p 480; Mar. 2 p 537

Jamieson Coal & Coke Company:
Annual Report, June 1 p 1324

Jarring and Squeezing Molding Machine, Combined,* June 8 p 1424

Jarring of Other Machinery, Machine Tool Work Disturbed by, June 22 p 1519

Jefferson Union Company:
Union Elbows,* June 1 p 1365

Jeffrey Mfg. Company:
Betterment of Industrial Conditions, Apr. 13 p 908

Handling Sand in the Foundry,* June 8 p 1422

Wire Cable Conveyor for Handling Kegs,* May 11 p 1165

Jenks, Jeremiah W.:
Causes for High Prices, Mar. 2 p 549

Johnson, C. W.:
Electricity in the Machine Shop,* Jan. 26 p 274

Joliet Rolling Mill Company, June 8 p 1433

Jolt Rammer, Core Bench,* June 1 p 1340

Jones & Laughlin Steel Company:
Another Rod Mill, Mar. 16 p 697

Improvements, Mar. 2 p 519; May 4 p 1059

Ore Operations, Feb. 9 p 369

Sales Department Changes, June 29 p 1571

Jones, John T.:
Step Process, May 18 p 1195

Judicial Decisions of Interest to Manufacturers, Jan. 5 p 17; Feb. 2 p 343; Mar. 9 p 595; Mar. 30 p 771; June 22 p 1514

K.

Kane & Roach:
Radial Drill,* May 18 p 1203

Kant-Leak Kleets and Press,* Mar. 16 p 675

Kegs, Wire Cable Conveyor for Handling,* May 11 p 1165

Kelly High Pressure Sand Blast,* Jan. 5 p 106

Kempsmith Mfg. Company:
New Plant,* Feb. 23 p 482

Kent, F. C.:
Machine Tool Arrangement, May 25 p 1279

Keokuk & Hamilton Motor Power Company:
Des Moines Rapids Hydroelectric Plant, Mar. 30 p 771

Kerr Turbine Company:
Turbo-Generators in the New York Post Office,* Apr. 27 p 1040

Keystone Bronze Company, Mar. 30 p 795

Keystone Foundry Supply Company:
Compound and Core Wash, Jan. 5 p 117

Keystone Steel Casting Company:
Succeeds Keystone Steel Foundry Company, Mar. 9 p 605

Kimball, W. W., Company:
Machine Molded Piano Plates,* Mar. 2 p 542

Kirk & Blum:
Adjustable Emery Wheel Hood,* Apr. 13 p 933

Unusual Dust Exhausting System,* May 18 p 1220

Kloman Mining Company:
Jones Step Process, May 18 p 1195

Knickerbocker Company:
Morse Dust Collector,* Jan. 5 p 101

Knoepfle, C. E.:
Efficiency in the Foundry, June 8 p 1395

Knox Pressed & Welded Steel Company, June 15 p 1464

Koenig, A.:
German Automobiles, May 11 p 1151

Koppers, H.:
By-Product Coke Ovens and Conservation, Feb. 9 p 374

Ovens Built and Building, June 29 p 1554

Kridler System:
Railroad Shippers' Service, May 11 p 1151

Krupp-Midvale Suit Dismissed, Feb. 16 p 424

Küppers Gas Producer,* June 22 p 1534

L.

La Belle Iron Works:
Improvements Deferred, Apr. 27 p 1018

La Belle-Wheeling Steel Merger Off, Apr. 6 p 837

Labor:
Accident Compensation and Conciliation, Apr. 13 p 883

Accident Compensation in Minnesota, Mar. 2 p 551

Accidents in Industrial Plants, Jan. 19 p 214

Alleged Structural Steel Dynamiters, Apr. 27 p 1005

American Workingman, May 4 p 1055

Anti-Accident Inspection Service, Feb. 2 p 288

Betterment of Steel Works Conditions, May 11 p 1144

Bill to Legalize the Boycott, Feb. 16 p 423

British Insurance Against Unemployment, Feb. 9 p 349

Carnegie Steel Company Relief Fund, Feb. 9 p 363

Central Station Welfare Work, Apr. 20 p 973

Coal Miners' Compensation Plan, Mar. 16 p 661

Compensation Legislation in New Jersey and Ohio, Apr. 6 p 825

Conditions in Iron Mining, Feb. 2 p 326

Conviction Under the Sherman Anti-Trust Law, Feb. 2 p 327

Constitutional Compensation Law, June 1 p 1319

Dual Usefulness of the Mill Nurse, Feb. 23 p 460

Eastern Blast Furnace Wage Reductions, Jan. 19 p 227

Eight-Hour Day for New York Machinists, Feb. 2 p 292

Employers' Compensation and Liability Systems, Feb. 23 p 498

Employers' Liability and Workmen's Compensation, Apr. 20 p 968

Employers' Liability in New York State, May 11 p 1126

Employers' Liability Insurance—Metal Trades, Apr. 13 p 912

Employers' Responsibilities, Apr. 13 p 930

Employment Bureau of Pittsburgh Manufacturers' Association, Mar. 9 p 575

English and American Conditions, Apr. 27 p 1005

Essential Cost Factor of Compensation, Jan. 12 p 121

Famous Danbury Hat Boycott Suit to Be Retried, Apr. 13 p 900

First Aid a Ground for Damages, June 29 p 1553

Frick Coke Company's Safety Committee, May 18 p 1216

Frick Coke Company Will Not Reduce Wages, Feb. 2 p 303

Immigrants in Iron and Steel Industry, Jan. 19 p 227

Industrial Education Evangelist, Apr. 27 p 1005

Inspection System to Prevent Industrial Accidents, Feb. 2 p 290

Italian Workmen's Insurance Prizes, Mar. 16 p 685

Machinists' Strike in New York and New Jersey, May 11 p 1126

Massachusetts Eight-Hour Bill Invalid, May 25 p 1237

Mechanical Engineer and Prevention of Accidents,* Feb. 16 p 434

Model Compensation Code, Feb. 23 p 498

Modern Shop Management, Apr. 20 p 970

Molders' and Stove Founders' Conference, Jan. 19 p 203

New York Compensation Law Void, Mar. 30 p 794

New York Machinists' Strike, May 4 pp 1054 and 1076; May 11 p 1126; May 18 p 1233

New York Workmen's Compensation Decision, Mar. 30 p 759

Notes, Mar. 30 p 777

Noteworthy Anti-Boycott Decision, Jan. 26 p 232

Ohio Workmen's Compensation Law, June 22 p 1539

Our Immigrant Workmen, Feb. 23 p 478

Private Accident-Relief System, Jan. 12 p 159

Recent Immigration, Apr. 13 p 898

Railroad Efficiency and the Unions, Feb. 23 p 476

Railroad Efficiency and the Unions, Mar. 23 p 724

Railroad Repair Shop Efficiency, Jan. 5 p 31

Ratio of Burden to, Apr. 20 p 965

Results of Iron Molders' Strikes in 1910, Jan. 12 p 155

Right Principles in Works Management, May 4 p 1084

Safety Devices for Iron Mine Workmen, June 22 p 1539

Septic Poison's Needless Cost in Works, Jan. 12 p 121

Speeding Under Scientific Management, Apr. 13 p 884

Standards of Efficiency in Shop Operations, Jan. 19 p 204

State Control of Women's and Minor's Wages, June 29 p 1554

Troubles at Baldwin Locomotive Works, June 15 p 1463

Unemployment Insurance in Great Britain, May 4 p 1072

Welfare Work, May 25 p 1276

Welfare Work of Electric Lighting Companies, June 8 p 1398

What Unions Are Doing for San Francisco, Feb. 16 p 420

Workingmen's Compensation, Feb. 23 p 499

Workingmen's Compensation in Ohio, Feb. 16 p 433

Workmen Appreciate Technical Publications, Apr. 13 p 884

Workmen's Accident Compensation in Seven States, Apr. 6 p 842

Workman's Insurance in Europe, Mar. 9 p 592

Works Accident Insurance, Apr. 6 p 818

Lackawanna Steel Company:
Annual Report, Mar. 2 p 536

Laclede Steel Company, Apr. 6 p 857; June 15 p 1501

Laidlaw-Dunn-Gordon Company:
Additions to Plant,* Feb. 9 p 383

Cylinder Castings,* Feb. 23 p 496

Lake, E. F.:
Automatic Temperature Controlling Instrument,* June 8 p 1418

Die-Casting Machines,* Apr. 27 p 1026

Lake Superior Iron & Chemical Company:
Properties Owned, Jan. 12 p 147

Lake Superior Iron Mining Veterans, May 18 p 1221

Lake Superior Iron Ore Association:
Ore Analyses, Apr. 13 p 906

Lake Superior Ore:
 Analyses, Apr. 13 p 906
 Analysis Books, Mar. 9 p 573
 Concrete Shafts of Record Size, Jan. 5 p 30
 Explorations, June 22 p 1533
 First Ore from the Cuyuna Range, May 25 p 1258
 Growing Pre-eminence of the Mesaba Range, Apr. 20 p 946
 In Hundreds of Millions of Tons,* Mar. 9 p 618
 Iron Ore Docks on the Lakes,* Apr. 20 p 972
 Iron Ore List with Lake Superior Map, Feb. 16 p 420
 Iron Ore Receipts at Lake Michigan Ports, Feb. 2 p 323
 Iron Ore Reserves Underestimated, May 4 p 1080
 Jones & Laughlin Ore Operations, Feb. 9 p 369
 Mining Conditions, June 8 p 1396
 Mining Curtailment, June 22 p 1537
 Mining on the Great Northern Properties, June 29 p 1569
 New Find on the Cuyuna Iron Range, Feb. 23 p 502
 New Marquette Ore Dock, Jan. 26 p 284
 New Minnesota Ore Road, Feb. 16 p 418
 Prices and the Furnaceman's Situation, Apr. 20 p 948
 Railroad Rebates on Iron Ore, May 4 p 1100
 Reduction in Iron Ore Price, Apr. 27 p 1004
 Shipments from the Hill Mine, June 1 p 1326
 Shipments in 1910, Mar. 9 p 595
 Shipments in April, May 11 p 1127
 Shipments for May, June 15 p 1484
 Steel Corporation Payments for Hill Ore, Jan. 12 p 163
 Two 617-Ft. Vessels Ordered, Feb. 9 p. 374
 Vermillion Iron Ore Explorations,* Apr. 20 p 990
 Lamb Electric Company:
 Portable Electric Radial Drill,* Apr. 6 p 866
 Landis Machine Company:
 Solid Adjustable Die Head,* Mar. 2 p 556
 Lane, H. M.:
 Binders for Foundry Cores, May 11 p 1140
 Core Room Management and Materials, Mar. 16 p 664
 Shop Floors,* Feb. 9 p 378; Feb. 16 p 426
 Lang, George:
 Influence of Manganese on Soft Steel, Apr. 13 p 913
 Langelier Mfg. Company:
 Swaging Machine,* May 25 p 1261
 Lathe or Turning Machine? June 29 p 1553
 Lathes:
 Acme Combination Turret,* Jan. 26 p 283
 American High Duty,* June 1 p 1363
 American Tool Works Company, New,* Mar. 2 p 546
 Barnes Motor-Driven Gap,* Jan. 26 p 281
 Bullard Vertical Turret, New,* June 1 p 1352
 Cincinnati Heavy Duty Pulley,* Apr. 27 p 1041
 Davis 26-In. Turret,* Mar. 30 p 800
 Harrington 16 to 32-In. Extension,* Feb. 23 p 481
 Libby 18-In. Turret,* Apr. 27 p 1034
 Morris Attachments, New,* Jan. 12 p 169
 Morris 20-In. Cone Head,* Jan. 19 p 224
 Ransom Buffing,* June 15 p 1485
 Reed Heavy Duty Engine,* Jan. 26 p 280
 Remington Bench,* Mar. 30 p 802
 Robbins Patternmakers',* Feb. 2 p 321
 Schellenbach Geared Head, 16-In.* Jan. 12 p 166
 Warner & Swasey Combination Turret,* June 8 p 1424
 Latin-America, Our Trade with, Feb. 16 p 422
 Lauck, W. J.:
 Labor Conditions in Iron Mining, Feb. 2 p 326
 Our Immigrant Workmen, Feb. 23 p 478
 Interesting Labor Inquiry on Immigrants, Jan. 19 p 227
 Recent Immigration, Apr. 13 p 898
 Lead and Spelter Production in 1910, May 4 p 1056
 Leber, E.:
 Briquettes from Cast Borings, Jan. 12 p 152
 Legislation and a Lower Cost of Living, Feb. 9 p 350
 Lehigh Coal & Navigation Company:
 Great Power Development in Eastern Pennsylvania, Mar. 16 p 660
 Leighton, George F.:
 Combination Punch and Shear,* Mar. 16 p 680
 Lesher, Paul T.:
 Data for Blast Furnace Piping,* Mar. 23 p 740
 Lewis, James, & Son:
 African Copper, Jan. 26 p 245
 Lewis, Wilfred:
 An Object Lesson in Efficiency, Apr. 13 p 902
 Liability and Workmen's Compensation, Employers', Apr. 20 p 968
 Liability in New York State, Employers', May 11 p 1126
 Liability Insurance, Employers'—Metal Trades, Apr. 13 p 912
 Libby 18-In. Turret Lathe,* Apr. 27 p 1034
 Lighting, Steel Mill,* Apr. 6 p 862
 Linde Air Products Company, Growth, Feb. 9 p 373
 Liquid Weigher, New,* June 8 p 1432
 Loan Evil, Salary, June 1 p 1318
 Lockport Stamping Company:
 Important Commercial Automobile Consolidation, Mar. 30 p 777
 Lockwood, Greene & Co.:
 Depreciation of Unprotected Steel Work, Feb. 2 p 306
 Locomotive Boiler Tubes, Process of Manufacturing,* May 4 p 1104
 Locomotives, Repair Equipment for Engine Houses, June 22 p 1519
 London, W. J. A.:
 Steam and Exhaust Pipe Size Charts,* Feb. 23 p 500
 Longmuir, Percy:
 Sulphur in the Air and Metal Corrosion, June 29 p 1589
 Lord, E. C. E.:
 Rust-Proof Slag Paint, May 11 p 1167
 Lozier Motor Company:
 New Plant at Detroit, Apr. 6 p 837
 Lubricators:
 Osgood Valveless Force Feed,* Mar. 9 p 625
 Richardson Mechanical,* Feb. 2 p 320
 Spencer Universal Chain Oil Feed,* June 29 p 1587
 White Star Individual-Continuous,* May 11 p 1160
 Luty, B. E. V.:
 Sheet and Tin Plate Trades in 1910, Jan. 5 p 64
 Lyman, James:
 Electric Furnace for the Manufacture of Iron and Steel, Feb. 2 p 322
 Lyon, Tracy:
 Scientific Industrial Operation, Apr. 13 p 922

M.

McArdle-Donnelly Case, Apr. 27 p 1007
 McBride, R. C.:
 Accelerated Corrosion Test of Metals, June 29 p 1555
 McCleary, Hon. James T.:
 Secretary American Iron and Steel Institute,* Jan. 19 p 177
 McConway & Torley Company:
 Car Wheel,* Mar. 30 p 789
 McKee, Arthur G.:
 Nelson Hot Blast Stove, Feb. 9 p 368
 McNeil, James, & Bro. Company:
 Steel Stack for 10,800-hp. Boiler Plant,* May 18 p 1221
 McWane Pipe Works:
 Handbook for Cast Iron Pipe Users, Jan. 26 p 273
 M. & L. Engineering & Machine Works:
 Acme Blueprint Machine,* Feb. 2 p 329
 Maben, J. C.:
 Pig Iron Conditions, Mar. 16 p 656
 Machine Shops:
 And Boiler Shops of Improved Construction,* Jan. 19 p 216
 Accident Prevention in,* May 18 p 1204
 Electricity in,* Jan. 26 p 274
 In Ritz-Carlton Hotel,* Mar. 16 p 681
 Machine Tool Builders' Association, National:
 Announcements, Apr. 13 p 884; May 4 p 1093
 Convention, May 25 p 1252
 Machine Tool Builders, Official Lists of, Jan. 26 p 234
 Machine Tools:
 Arrangement, May 25 p 1278
 Awards at Brussels Exposition, Feb. 16 p 424
 German, Feb. 23 p 501
 Long Life of American, May 4 p 1055
 Novel Application of Motor Drive to,* May 4 p 1088
 Machinery:
 American, in Europe, May 18 p 1198; June 15 p 1481
 Beating Down Prices, June 1 p 1296
 Buying, Two Influences in, June 22 p 1499
 Ethics of Selling, June 15 p 1448
 Exhibit that Paid, Mar. 9 p 572
 Increasing Exports, Jan. 26 p 233
 Proposed Exposition, June 1 p 1295
 To Market American Abroad, May 25 p 1239
 Machine Tool Work Disturbed by Jar-ring of Other Machinery, June 22 p 1519
 Machinists, Eight-Hour Day for New York, Feb. 2 p 292
 Machinists' Strike, New York, May 4 p 1054 and 1076; May 11 p 1126; May 18 p 1233
 Magnesite End Blocks, Open Hearth Furnaces with, Mar. 23 p 716
 Magnetic Separator, New Cutler-Hammer,* June 29 p 1581
 Magnets, Unloading Pig Iron With Lifting,* Apr. 6 p 865
 Maine, Raising the Battleship,* June 8 p 1430
 Maintenance of Way Convention, Mar. 30 p 776
 Malleable Castings, Annealing,* Mar. 23 p 726; Apr. 20 p 948
 Malleable Castings Plant, Proposed,* Jan. 5 p 72
 Management, Modern Shop, Apr. 20 p 970
 Management, Right Principles in Works, May 4 p 1084
 Manganese and Silicon in Foundry Practice,* June 1 p 1348
 Manganese in the Presence of Chromium, Determination of, May 11 p 1156
 Manganese on Soft Steel, Influence of, Apr. 13 p 913
 Manhattan Perforated Metal Company, May 18 p 1183
 Manufacturers, Association of American Steel:
 Annual Meeting, Mar. 9 p 595
 Manufacturers Confer on Trade Conditions, Steel, Jan. 19 p 208
 Manufacturers, National Association of:
 Convention Call, Apr. 20 p 988
 Convention Proceedings, May 18 p 1182; May 25 p 1258
 Manufacturers, Steel, Consider Welfare Work, May 4 p 1056

Manufacturing Equipment & Engineering Company:
Twentieth Century Steel Stock Rack,* Jan. 19 p 226

Manufactures, Foreign Tariff Work of Bureau of, May 18 p 1214

Manufactures in Utah, May 4 p 1057

Manufactures, Our Trade Balance Due to Our, May 25 p 1236

Marine Congress, Merchant, Jan. 19 p 223

Maris Brothers:
Special Foundry Crane,* Jan. 5 p 92
Massachusetts Eight-Hour Bill Invalid, May 25 p 1237

Massachusetts Fan Company:
Special Fan Drives,* Apr. 13 p 932

Massachusetts Institute of Technology:
Desires More Liberal State Aid, Jan. 19 p 202

Notable Anniversary, Apr. 13 p 883

Mathews, Robert:
Efficiency Figures, Skeptic on, Apr. 6 p 820

Labor-Speeding Under Scientific Management, Apr. 13 p 884

Mechanical Engineer and Prevention of Accidents,* Feb. 16 p 434

Mechanical Engineers:
Announcements, Mar. 2 p 545; Apr. 27 p 1033; May 4 p 1078

Convention Proceedings, June 1 p 1308; June 8 p 1411*

Monthly Meeting, Feb. 9 p 374

Mechanical Handling of Materials, Apr. 27 p 1022

Merchant Marine Congress, Jan. 19 p 223

Merger, Proposed Southern, Apr. 13 p 907

Merger Rumors, Iron and Steel Company, Mar. 2 p 518

Mesaba Range, Growing Pre-eminence of the, Apr. 20 p 946

Messerschmidt:
Briquettes from Cast Borings, Jan. 12 p 152

Mesta Machine Company:
Haniel & Lueg Steam-Hydraulic Forging and Bending Press,* Jan. 5 p 48

Large High Speed Flywheel,* Feb. 16 p 431

Rapid Construction of a Blowing Engine,* Mar. 23 p 738

Forging and Bending Press Catalog, June 29 p 1587

Steam-Hydraulic Forging Press,* June 15 p 1471

Metal Perforating Process, Smith,* Mar. 16 p 672

Metal Prices for the Period 1898-1910 in Carloads, Fluctuations in,* Jan. 19 p 212

Metal Rolling in the United States, Apr. 20 p 966

Metals, Two New, Mar. 9 p 589

Metal Trades Associations:
California Annual Meeting, Feb. 2 p 311

Chicago Annual Meeting, Mar. 23 p 740

Cleveland, Boston and Cincinnati Annual Meetings, Mar. 9 p 589

National Convention, Apr. 13 p 901; Apr. 20 p 976

New National Officers, Mar. 23 p 727

New York and New Jersey Branch, Apr. 13 p 907

Pacific Coast Convention, Apr. 27 p 1007

Worcester Annual Meeting, Mar. 16 p 666

Meters:
General Electric Boiler Flow, June 22 p 1531

Thomas,* Mar. 16 p 676

Uehling Waste,* June 29 p 1574

Mexico, Oil Developments, May 4 p 1083

Michigan Stove Company, Annual Meeting, Feb. 9 p 382

Midland Machine Company:
Radial Drill, 30-In.,* May 4 p 1108

Roll-Over Core Machine,* Apr. 27 p 1024

Midvale Steel Company:
Annual Report, Apr. 6 p 845

Krupp Suit Dismissed, Feb. 16 p 424

Midland Steel Company:
Purchased by Crucible Steel Company of America, Feb. 2 p 293

Miles, John B.:
New Dry Blast Process Tested,* June 1 p 1354

Mill Lighting, Steel,* Apr. 6 p 862

Mill Nurse, Dual Usefulness of the, Feb. 23 p 460

Miller, August A.:
Philadelphia Iron Trade in 1910, Jan. 5 p 58

Milling Cutters and Their Efficiency,* May 11 p 1152

Milling Machines:
Clough Vertical Combination Drill and Bench,* May 25 p 1273

Fosdick Horizontal Milling, Drilling and Boring,* May 4 p 1107

Newton Duplex, No. 1/2,* Feb. 16 p 432

Pratt & Whitney Thread, Some Adaptations of,* Jan. 26 p 272

Rockford Vertical,* Mar. 2 p 552

Mills, A. P.:
Essex-Merrimac Chain Bridge, May 4 p 1075

Mills:
Five Gary Merchant,* Mar. 9 p 597

Gary 60-in. Universal Plate,* June 22 p 1526

Motors for Driving Main Rolls of,* Feb. 16, p 438

Milwaukee Transit & Car Company, June 1 p 1343

Miners' Compensation Plan, Coal, Mar. 16 p 661

Mines, Bureau of:
Essential Factors in the Formation of Producer Gas, May 4 p 1071

Mines in Brazil, Itabira Iron, Apr. 27 p 1007

Mines, Underground Shops in South African, Mar. 30 p 759

Mine Timbers, Carnegie Publications on Steel, May 11 p 1142

Mine Workmen, Safety Devices for Iron, June 22 p 1539

Mining Beyond the Arctic Circle, Iron,* Mar. 9 p 608

Mining Engineers (See American Institute of)

Mining, Labor Conditions in Iron, Feb. 2 p 326

Minimum Iron Requirements, The Country's, May 18 p 1181

Mixers:
Auto Sand,* Jan. 5 p 112

Paxson Grooved Roller Sand,* May 4 p 1101

Progress in Heated Foundry, June 1 p 1349

Sellers Centrifugal Sand,* Jan. 5 p 113

Standard Sand,* Jan. 5 p 114

Moldenke, Dr. Richard:
Briquetting Metal Borings,* June 1 p 1344

Recent Tendencies in the Foundry Industry, Jan. 5 p 66

Molders' and Stove Founders' Conference, Jan. 19 p 203

Molders' Strikes in 1910, Results of Iron, Jan. 12 p 155

Molding, Cast Iron Pipe,* May 4 p 1098

Molding Machines:
Arcade Mfg. Company,* Jan. 5 p 88

Buch Combined Jarring and Squeezing,* June 8 p 1424

Buch Gravity,* Jan. 5 p 84

Capacities of, June 29 p 1569

Edward A. Pridmore,* Jan. 5 p 86

Experience with, Jan. 12 p 156

Farwell Squeezer,* Jan. 5 p 83

For Piano Plates,* Mar. 2 p 542

Four New Osborn,* June 1 p 1342

Pridmore, Henry E., Jan. 5 p 87

Henry E. Pridmore Electrically Driven Jarring Machine,* June 1 p 1338

Henry E. Pridmore, With Stripping Plate,* May 25 p 1274

International Mower Part,* June 15 p 1484

International Turn-Over,* May 11 p 1158

New Tabor Jarring and Roll-Over,* Jan. 5 p 86

Osborn Mfg. Company,* Jan. 5 p 85

Molding Thin Castings on an Arcade Jarring Machine,* Apr. 20 p 980

Molders' Tools,* Jan. 5 p 117

Molds, Experience with Permanent, June 8 p 1402

Molds, Ornamental Castings Made in Permanent,* Jan. 5 p 68

Moline Tool Company:
New Multiple Spindle Drill,* Apr. 6 p 855

Moller, J. A.:
Oval Chuck,* Jan. 5 p 52

Monarch Engineering & Mfg. Company:
Core and Annealing Oven Cars,* Jan. 5 p 95

Monorail Grab Bucket Coal Hoist,* Mar. 2 p 550

Moore, C. F.:
Remarkable Boiler Performance, June 22 p 1500

Morgan Construction Company:
Private Accident-Relief System, Jan. 12 p 159

Morris, John B., Machine Tool Company:
Cone Head Lathe, 20-in.,* Jan. 19 p 224

Lathe Attachments, New,* Jan. 12 p 169

Schellenbach Geared Head Lathe, 16-In.,* Jan. 12 p 166

Swiveling Radial Drill Table,* Jan. 5 p 49

Morrison & Co.:
Chilean Buyers in New York, May 11 p 1150

Morse Dust Collector,* Jan. 5 p 101

Motor Drive, Novel Application to Machine Tools,* May 4 p 1088

Motors for Commercial Vehicles, Advantages of Long Stroke, Mar. 23 p 744

Motors for Driving Main Rolls of Mills,* Feb. 16 p 438

Motor Starters, Magnetic Switch,* Apr. 6 p 847

Motor Truck Performances, Notes on, Jan. 12 p 145

Mount Savage Firebrick Works:
To Enlarge, June 22 p 1517

Mumford Molding Machine Company:
Core Bench Jolt Rammer,* June 1 p 1340

Cylinder Castings,* Feb. 23 p 496

Municipal Congress and Exposition, Chicago, Jan. 5 p 82

Munnoch, P.:
Size of a Coke Charge for a Cupola, June 29 p 1555

Murcley Machine & Tool Company:
Motor Driven Pipe Threader,* Apr. 27 p 1036

Revolving Chuck,* Feb. 23 p 496

Museum of Safety Chartered, American, June 1 p 1346

Museum of the Wire Industry,* June 22 p 1522

Museums, Private Industrial, Jan. 26 p 233

Mutuality, Apr. 13 p 908

Myers, Edward A.:
Advantages of Long Stroke Motors for Commercial Vehicles, Mar. 23 p 744

N.

Name Plates on American Machinery, Mar. 2 p 518
 National-Acme Mfg. Company: New Self-Opening Die Head,* June 1 p 1351
 National Association of Jobbers of Wrought Iron Pipe and Fittings: Convention, Mar. 16 p 658
 National Association of Manufacturers: Convention Call, Apr. 20 p 988
 Convention Proceedings, May 18 p 1182; May 25 p 1258
 National Association of Stove Manufacturers: Convention, May 18 p 1232
 National Building Material Exhibition, May 18 p 1213
 National Cash Register Works: Unusual Dust Exhausting System,* May 18 p 1220
 National Electric Light Association: Central Station Welfare Work, Apr. 20 p 973
 More Water Power Development Needed, Jan. 26 p 246
 National Electroplaters' Association, Feb. 16 p 424
 National Founders' Association: Results of Iron Molders' Strikes in 1910, Jan. 12 p 155
 National Gas and Gasoline Engine Trades Association: Convention Programme, Apr. 13 p 927
 National Machine Recorder Company: Recorder,* Feb. 16 p 425
 National Machinery Company: Semi-Automatic Nut Tapper,* June 1 p 1362
 National Radiator Company: Eastern Plant, Apr. 20 p 949
 National Tube Company: Coke Ovens at Lorain, Ohio, Mar. 9 p 588
 Pittsburgh Railway Club Visits the, May 4 p 1083
 Visited by National Gas Association of America, May 25 p 1255
 View in National Works,* June 8 p 1416
 Natural Gas in 1909 and 1910, Feb. 16 p 437
 Nau, J. B.: Progress in Heated Foundry Mixers, June 1 p 1349
 Naval Additions Proposed, Mar. 2 p 519
 Navy an Industrial School, Apr. 27 p 1004
 Navy Department Perplexity, Mar. 16 p 644
 Navy Tool Steel, Revised Specifications, June 29 p 1568
 Navy Yard Apprentices, Apr. 6 p 850
 Nelson Hot Blast Stove, Feb. 9 p 368
 Nelson Valve Company: New Works,* June 1 p 1356
 Nevin, A. Parker: Workingmen's Compensation, Feb. 23 p 499
 Newark Foundrymen's Association, Jan. 12 p 155; Feb. 9 p 366; Apr. 13 p 884; May 11 p 1157; June 15 p 1480
 Newark Gear Cutting Machine Company: Gear Pattern Cutter,* Feb. 2 p 319
 New England Foundrymen's Association, Jan. 19 p 203; Feb. 16 p 445
 New Jersey Foundry & Machine Company: Delta and Changeezy Tramrail Trolleys,* Jan. 5 p 93
 Very Complete Foundry Trolley System,* Feb. 23 p 493
 Newport News Shipbuilding & Dry Dock Company: Large Castings in Fast Time,* June 29 p 1588
 Newport Rolling Mill Company: Rust-Resisting Iron, Mar. 9 p 639
 Newten Cupola,* Jan. 5 p 100

Newton Machine Tool Works, Inc.: Duplex Miller, No. 1½,* Feb. 16 p 432
 New Cold Saw,* Mar. 30 p 795
 Rotary Planer,* Mar. 16 p 686
 New York Barge Canals, May 4 p 1057
 New York City's Largest Steel Girder, Mar. 23 p 716
 New York Foundation Company: Concrete Shafts of Record Size, Jan. 5 p 30
 New York Metal Exchange: Election, Apr. 6 p 855
 New York State, Employers' Liability in, May 11 p 1126
 New York State Steel Company: Annual Meeting, Feb. 23 p 497
 New York's Municipal Building, Feb. 23 p 485
 Nichol Syndicate: Pneumatic Handling of Sulphuric Acid,* Mar. 9 p 616
 Nicholson, W. H., & Co.: Wyoming Automatic Eliminator,* Apr. 13 p 918
 Noble, Warren: Advantages of Worm Drive for Automobiles, May 4 p 1070
 Noncancellation Clauses, Confusion Over, Jan. 5 p 4
 Nonferrous Alloys, Castings from, Jan. 12 p 154
 Norris, George L.: Vanadium in Cast Iron, June 8 p 1398
 North Wales Machine Company: Geared Power Hack Saw,* Feb. 16 p 443
 Grinder Head, 8-In.,* Feb. 9 p 386
 Northern Engineering Works: Newten Cupola,* Jan. 5 p 100
 Tumbling Barrel,* Feb. 2 p 327
 Northern Equipment Company: Copes Boiler Feed Regulator,* Jan. 12 p 170
 Northern Iron Company: Rifle Shots Open a Chilled Cinder Notch, Feb. 2 p 311
 Norway, Electric Steel and Iron in, Feb. 2 p 291
 Norway, Iron Mining Beyond the Arctic Circle,* Mar. 9 p 608
 Northwestern Iron Company: Gröndal Iron Ore Briquetting Plant, Mar. 9 p 594
 Noxon, Frank W.: The Rate Decision and Railway Credit, Mar. 23 p 717
 Noyes T Square,* Feb. 9 p 387
 Nurse, Dual Usefulness of the Mill, Feb. 23 p 460
 Nut Tapper, National Semi-Automatic,* June 1 p 1362
 Nuttall, R. D., Company: Buys Hydraulic Machine Company's Plant, Mar. 16 p 658
 Nutter & Barnes Company: Automatic Saw Sharpener,* June 1 p 1350

O.

Obermann, A. W.: Acid Fume Removing Devices,* Mar. 16 p 667
 Obituary: Airedale, Lord (Sir James Kitson),* Mar. 30 p 775
 Alberger, Louis R.* Feb. 9 p 367
 Barnes, George A., Apr. 6 p 846
 Barnett, James, Jan. 19 p 199
 Bickley, Mortimer H., Apr. 6 p 846
 Bishop, George H. Apr. 20 p 964
 Bovaird, David, Jan. 19 p 199
 Branch, Richard C., Feb. 23 p 472
 Breslin, Thomas, May 4 p 1073
 Brown, Alexander E.,* May 4 p 1082
 Brown, Col. Lewis T., Mar. 23 p 721
 Brunsman, Anthony G., Mar. 23 p 721
 Bush, Harry W., May 11 p 1138
 Carry, James J., May 4 p 1073
 Coleman, Harry W., Feb. 9 p 367
 Connelly, Daniel, Mar. 2 p 533
 Corbett, William H., Mar. 2 p 533

Corey, Alfred A., Sr., Jan. 5 p 18
 Corrigan, John, Mar. 9 p 586
 Cribben, Henry, Apr. 13 p 897
 Dederick, Peter K., Feb. 9 p 367
 Dempsey, Daniel, Feb. 9 p 367
 Dick, Charles S., Mar. 16 p 660
 Dilworth, Lawrence, June 15 p 1449
 Dreyfus, Achille A., Apr. 27 p 1020
 Duff, Alfred B., May 25 p 1259
 Edwards, Mahlon C., Feb. 9 p 367
 Evinger, E. R., June 29 p 1567
 Fifield, George W., Feb. 9 p 307
 Fleming, Wm. Kennedy, Feb. 23 p 472
 Galvin, Thomas H., Apr. 6 p 846
 Gardner, Robert J., Jan. 19 p 199
 Goodyear, Charles W., Apr. 27 p 1020
 Gorton, William S., Apr. 20 p 964
 Grammes, Lewis F., May 4 p 1073
 Grippin, William A., Mar. 9 p 586
 Guild, Curtis, Sr., Mar. 16 p 660
 Hammett, A. Fred, June 1 p 1317
 Hanna, E. E., Jan. 12 p 146
 Heath, W. C., May 25, p 1259
 Henning, Gustavus C., Jan. 5 p 18
 Hogan, Martin J., Feb. 23 p 472
 Holmes, E. M., Mar. 2 p 533
 Hooker, John D., June 8 p 1381
 Hughes, John P., Apr. 20 p 964
 Hunt, Charles W., Mar. 30 p 775
 Jackman, Frank S., May 11 p 1138
 Johnson, J. E., May 4 p 1073
 Johnson, Tom L., Apr. 13 p 897
 Johnston, Samuel, Apr. 27 p 1020
 Kahn, Lehman S., May 25, p 1259
 Keenan, Jeremiah J., Feb. 2 p 312
 Keyes, Jay H., June 8 p 1381
 King, Charles C., Mar. 2 p 533
 Kissick, J. F., June 1 p 1317
 Kitson, Sir James (Lord Airedale),* Mar. 30 p 775
 Kjellin, Dr. F. A., Feb. 9 p 367
 Lappan, James, June 15 p 1449
 Layng, Frank S., Mar. 16 p 660
 Lee, William W., June 22 p 1513
 Leibert, Owen, Apr. 6 p 846
 Liveright, Benjamin K., Feb. 2 p 312
 Lord, Nathaniel W., May 25 p 1259
 McDonald, John B., Mar. 23 p 721
 Manning, Edward B., Jan. 26 p 246
 Maus, Frederick K., Mar. 9 p 586
 Miller, Walter G., Jan. 26 p 246
 Milliken, Andrew, Mar. 2 p 533
 Mitchell, Charles E., Mar. 23 p 721
 Moore, Samuel H., Feb. 23 p 472
 Morgan, Charles H.,* Jan. 12 p 150
 Nash, James M., Feb. 2 p 312
 Nesbitt, Frederick, June 29 p 1567
 Orcutt, Calvin B., Feb. 2 p 312
 Paxton, William H., May 4 p 1073
 Peebles, Robert, Feb. 16 p 418
 Perkins, Simon, June 8 p 1381
 Poulsom, Niels, May 11 p 1138
 Poulterer, Joseph C., Jan. 19 p 199
 Reed, Joseph B., June 22 p 1513
 Rhodes, Charles R., Feb. 16 p 418
 Richardson, John, Feb. 9 p 367
 Rickard, Thomas, Apr. 6 p 846
 Saunders, Leslie M., Jan. 12 p 146
 Seaver, John W.,* Jan. 19 p 199
 Sly, W. W., May 25 p 1259
 Spaulding, Jay E., Jan. 12 p 146
 Spencer, A. N., May 25 p 1259
 Smith, Ephraim, Mar. 23 p 721
 Spearman, John J., June 8 p 1381
 Stevenson, Thomas F., Apr. 27 p 1020
 Taylor, Harry S., Mar. 2 p 533
 Thayer, Nathaniel, Mar. 23 p 721
 Tupper, Jonas C. H., Apr. 6 p 846
 Upson, Andrew S.,* Apr. 6 p 846
 Vanduzen, E. W., Apr. 6 p 846
 Wallace, Robert, Mar. 16 p 660
 Wardwell, Edward H., Apr. 27 p 1020
 Wessel, Augustus, June 1 p 1317
 Wetherill, James P., May 4 p 1073
 White, Leroy S., Feb. 23 p 472
 Wilfong, Millard F., Apr. 27 p 1020
 Wolff, Ludwig, Apr. 20 p 964
 Oglebay, Norton & Co.: Iron Ore List with Lake Superior Map, Feb. 16 p 420
 Ohio Sand Blast Tumbling Barrel,* Jan. 5 p 103
 Ohio, Workingmen's Compensation in, Feb. 16 p 433

Ohio Workmen's Compensation Law, June 22 p 1539
 Oil Burners, Hauck Portable,* Jan. 5 p 98
 Oil Developments, Mexican, May 4 p 1083
 Oil Feed, Spencer Universal Chain,* June 29 p 1587
 Oil Fuel for Air Furnaces, June 15 p 1465
 Oiling System, White Star Individual-Continuous,* May 11 p 1160
 Oilstone Holder, Badge,* Apr. 13 p 931
 Oiler, Osgood Valveless Force Feed,* Mar. 9 p 625
 O. K. Tool Holder Company: Test of O. K. Tools,* Feb. 23 p 491
 Oliver Machinery Company: New Universal Saw Bench,* Jan. 5 p 109
 Olympic, Mechanical Equipment of the, June 29 p 1555
 Open-Hearth Furnaces: (See Furnaces, Open-Hearth)
 Operating Costs, Distributing Factory,* June 15 p 1479
 Ore: (See Iron Ore) (See Lake Superior Ore)
 Orenstein-Arthur Koppel Company: Fuel Handling on the Chelsea Piers,* Feb. 23 p 497
 New Plant, May 25 p 1267
 Ore Unloading Plant at Cleveland, Pennsylvania Railroad's New, Mar. 30 p 799
 Ore Unloading Plant, New Brown,* Apr. 6 p 861
 Ore-Washing Plant in Minnesota, Another, June 29 p 1567
 Orient Coke Company, June 1 p 1317
 Oriskany Ore & Iron Company: Property Changes, June 15 p 1464
 Osborn Mfg. Company: Buys American Wire Brush Company, Apr. 13 p 900
 Four New Foundry Machines,* June 1 p 1342
 Molders' Bellows,* Mar. 2 p 548
 Molding Machines,* Jan. 5 p 85
 Osborne, Charles G.: 15-Ton Heroult Furnace at South Chicago,* Jan. 26 p 262
 Osgood, J. L., Lubricator Company: Valveless Force Feed Oiler,* Mar. 9 p 625
 Ottawa's Advantages, May 18 p 1195
 Otto Gas Engine Works, Feb. 9 p 365
 Outerbridge, Alexander E., Jr., Ferromanganese in Car Wheel Iron, Mar. 16 p 644
 Manganese and Silicon in Foundry Practice,* June 1 p 1348
 Silicon Alloy, Jan. 5 p 44
 Oven Cars, Monarch Core and Annealing,* Jan. 5 p 95
 Ovens, Koppers Coke, June 29 p 1554
 Oxy-Acetylene Torch, Steel Cutting Ovens, Koppers Coke, June 29 p 1554
 Oxy-Acetylene Torch, Steel Cutting with the,* Mar. 9 p 622

P.

Pacific Coast Metal Trades Convention, Apr. 27 p 1007
 Packing Machine, Stirling,* Jan. 19 p 225
 Paint, Rust-Proof Slag, May 11 p 1167
 Pangborn, Thomas W., Company: Ideal Sand Dryer,* Jan. 5 p 112
 Papyrus Artificial Paper Mfg. Company: Paper Rope, Mar. 30 p 799
 Paramount Indestructible Steel Clamp,* Apr. 6 p 867
 Parsons, C. A.: Geared Turbine and Its Lessons, Apr. 6 p 819
 Parting Compound and Core Wash., Jan. 5 p 117
 Patent America and the Foreign, Mar. 9 p 571
 Patent Laws, To Amend the German, Jan. 12 p 120

Patterns, Experience with Concrete, Feb. 9 p 365
 Patterson Tool & Supply Company: Adjustable Electric Light Bracket,* Apr. 20 p 981
 Patterson, W. W., Company: Six Sheave Steel Block,* Jan. 5 p 47
 Pattison, Wallace M.: Modern Business Methods, Apr. 13 p 905
 Pawling & Harnischfeger Company: Cranes in a Material Yard,* May 18 p 1214
 Foundry Grab Bucket,* Jan. 5 p 90
 Paxson, J. W., Company: Foundry Supplies, May 25 p 1257
 Grooved Roller Sand Mixer,* May 4, p 1101
 Outerbridge Silicon Alloy, Jan. 5 p 44
 Quaker City Foundry Supply Exhibit, Feb. 2 p 318
 Runout Stopper,* Jan. 5 p 116
 Peck, W. A.: Sure Center Finder,* Apr. 27 p 1031
 Pelton-Francis Water-Wheels, Notable Installation of,* May 18 p 1221
 Pels, Henry, & Co.: Deep-Throated Power Punch,* Feb. 9 p 389
 Pennsylvania, Great Power Development in Eastern, Mar. 16 p 660
 Pennsylvania Railroad Company: Apprentices, Apr. 6 p 851
 Freight Stations in Philadelphia, Feb. 16 p 445
 New Electric Locomotives, Mar. 9 p 593
 New Ore Unloading Plant at Cleveland, Mar. 30 p 799
 New Railroad Track Scale,* Apr. 13 p 924
 Pennsylvania Steel Company: Annual Report, May 11 p 1150
 Carting a 60-Ton Girder, Mar. 9 p 572
 Perforating Plant in Chicago, New, June 15 p 1485
 Perforating Process, Smith Metal,* Mar. 16 p 672
 Perkins, George W.: Trade Co-operation and Government Oversight, Mar. 16 p 642
 Perley, Ward B.,* May 4 p 1077
 Permanent Molds, Ornamental Castings Made in,* Jan. 5 p 68
 Petroleum Iron Works Company: Contracts, Apr. 20 p 989
 Petroleum Production in 1910, United States, Jan. 10 p 226
 Philadelphia Foundry Foremen, Feb. 16 p 406; Mar. 16 p 658; May 11 p 1127; June 22 p 1501
 Philadelphia Foundrymen's Association, Jan. 12 p 155; Feb. 9 p 386; Mar. 9 p 588; Apr. 14 p 918; May 11 p 1149; June 15 p 1464*
 Philadelphia Iron Trade in 1910, Jan. 5 p 58
 Philadelphia, Pennsylvania Railroad Freight Stations in, Feb. 16 p 445
 Philadelphia Pig Iron Prices for 10 Years,* Apr. 13 p 885
 Philadelphia's Ore Imports, Handling, Apr. 20 p 973
 Philadelphia Roll & Machine Company: Chilled Rolls with Passes Cast In,* May 25 p 1269
 Huge Cast Iron Still,* May 11 p 1166
 Piano Plates, Machine Molded,* Mar. 2 p 542
 Pig Iron: British Output, First Half 1910, Jan. 12 p 122
 British Production 1910, May 25 p 1257
 Costs in Alabama, May 11 p 1124
 Forty Years' Progress,* June 22 p 1516
 Foundrymen Report on Stocks and the Outlook, Mar. 9 p 594
 Germany Making Electric Steel from Basic, Jan. 5 p 39
 Germany's Production in 1910, Apr. 20 p 992
 Leaders in Production, Feb. 2 p 289

Monthly Statement,* Jan. 5 p 6; Feb. 9 p 352; Mar. 9 p 574; Apr. 6 p 822; May 3 p 1058; June 8 p 1382
 New Charcoal for Chilled Car Wheels, Mar. 9 p 605
 Output in Two Panics,* April 6 p 824
 Output the Criterion,* May 25 p 1239
 Philadelphia Prices for 10 Years,* Apr. 13 p 885
 Production in Canada, 1910, Feb. 23 p 502
 Record of 1910, Feb. 2 p 306
 Soaring in Russia, June 8 p 1421
 Standards for Various Kinds, June 8 p 1400
 Steel Making in 1910, June 1 p 1341
 Unloading with Lifting Magnets,* Apr. 6 p 865
 Pile Driver, Browning,* Feb. 23 p 488
 Pipe and Plumbing Jobbers' Conventions, Mar. 23 p 726
 Pipe: Cast Iron Molding,* May 4 p 1098
 Cast Iron Prices from 1900 to 1910,* Mar. 2 p 534
 Large Sizes of Lap Welded,* Feb. 2 p 324
 Murcley Motor-Driven Threader,* Apr. 27 p 1036
 New Toledo Threading Tool,* Feb. 9 p 386
 Steam and Exhaust Size Charts,* Feb. 23 p 500
 Williams 12-in. Steam-Driven Threader,* May 18 p 1218
 Piping, Data for Blast Furnace,* Mar. 23 p 740
 Pittsburgh Crucible Steel Company: John W. Dougherty, President,* Mar. 2 p 535
 Pittsburgh Emery Wheel Company: Swinging Frame Grinding Machine,* June 1 p 1341
 Pittsburgh Foundry Conventions, May 25 p 1911; June 1 p 1328*
 Pittsburgh Foundrymen's Association, Jan. 12 p 155; Mar. 9 p 573; Apr. 6 p 821; May 4 p 1083; June 15 p 1462
 Pittsburgh Gage & Supply Company: White Star Individual-Continuous Oiling System,* May 11 p 1160
 White Star Oil Filter Orders, May 18 p 1183
 Pittsburgh Iron Trade in 1910, Jan. 5 p 56
 Pittsburgh Machine Tool Company: New Plant, Mar. 2 p 553
 Pittsburgh Manufacturers' Association: Employment Bureau of, Mar. 9 p 575
 Pittsburgh Pneumatic Company: Chipping Hammer,* Jan. 5 p 106
 Pittsburgh Railway Club at Ellwood City Tube Plant, May 4 p 1083
 Pittsburgh Steel Company: Annual Report, Apr. 20 p 974
 Pittsburgh Steel Products Company: Standard Reinforcement for Concrete, Mar. 23 p 725
 Pittsburgh, Traffic Club of, Apr. 6 p 825
 Pittsburgh-Westmoreland Coal Company, Apr. 13 p 907
 Pittsburgh's Position in Steel, Feb. 2 p 304
 Planers: Allner-Boswell Radius Attachment,* Apr. 27 p 1038
 Crescent Variable Feed,* Jan. 5 p 110
 Newton Rotary,* Mar. 15 p 686
 New Triumph Drive for,* June 29 p 1573
 Plate Mill, Gary 60-in. Universal,* June 22 p 1526
 Plates, Time Factor and Clearance in Punching,* June 15 p 1480
 Plumb, Fayette R., Inc.: Expansion of,* Feb. 2 p 314

Plume & Atwood Mfg. Company: Electrically Driven Brass Mill,* Jan. 26 p 278

Polishing Machine, Autogenous Welding Company's High Duty,* Mar. 23 p 735

Polishing Machine, Robinson Automatic,* May 4 p 1097

Pollock, William B., Company: Improved Berg Cinder Car,* Mar. 23 p 739

Porceliron Stove Company, May 11 p 1151

Porter, John J.: Fuel Efficiency of the Blast Furnace, June 29 p 1554

Problem of Blast Furnace Efficiency, Jan. 5 p 5

Portland, Ore., Unique Drawbridge, Jan. 5 p 81

Positive Clutch & Pulley Company: Improved Transmission Appliances,* May 11 p 1163

Potassium Chromate as Metal Protection Agent, June 29 p 1579

Potter & Johnston Machine Company: Making Duplicate Automobile Parts,* Mar. 9 p 606

Potts, Horace T., & Co.: Swedish Tool Steel Agencies, Feb. 9 p 386

Pouring Spout, Hooper Continuous,* May 25 p 1267

Praken, H.: Hoists for Foundry and Shop, Mar. 23 p 741

Pratt & Whitney Company: Automatic Cylindrical Sizing Grinder,* Jan. 5 p 54

Some Adaptations of the Thread Miller,* Jan. 26 p 272

Pratt Institute Exhibition, May 25 p 1269

Precision Instrument Company: Simmance-Abady Co., Recorder,* May 11 p 1162

Prentice Brothers Company: New Ball Bearing Drill,* Apr. 27 p 1042

Pressed Steel Car Company: Annual Report, Feb. 23 p 475

Presses:

- Bliss, Straight-Sided, of Unusual Proportions,* Jan. 5 p 45
- Ferracute Labor-Saving Staybolt,* May 25 p 1266
- Forging with a High-Speed Hydraulic,* Jan. 26 p 282
- Frontier Heavy Pattern Drill,* June 8 p 1433
- Garrison 400-Ton Double-Acting,* Jan. 12 p 159
- Haniel & Lueg Steam-Hydraulic Forging and Bending,* Jan. 5 p 48
- Kant-LeLak Kleets and Press,* Mar. 16 p 675
- Large Toledo Single Crank,* May 4 p 1087
- Mesta Steam-Hydraulic Forging,* June 15 p 1471
- New Standard Reducing,* Jan. 12 p 163
- Small Ferracute Punching and Riveting,* Mar. 16 p 685
- Unusual Standard Installation,* Feb. 23 p 494
- Watbury Cam Pillar,* Apr. 27 p 1036
- Watson-Stillman Handy Hydraulic,* June 29 p 1578

Pressures, Sand Blast, Feb. 9 p 350

Prices:

- And Steel Manufacturers, Jan. 19 p 174
- Beating Down Machinery, June 1 p 1296
- Cast Iron Pipe, from 1900 to 1910,* Mar. 2 p 534
- Cause for High, Mar. 2 p 549
- Fluctuations in Iron and Steel Products, for 13 Years,* Jan. 5 p 28
- Fluctuations in Metal for 1898-1910,* Jan. 19 p 212

Government Regulation of, Apr. 20 p 947

Higher Machine Tool, June 8 p 1380

Lake Ore and the Furnaceman's Situation, Apr. 20 p 948

Ore and Pig Iron, Mar. 2 p 517

Philadelphia Pig Iron, for 10 Years,* Apr. 13 p 885

Rate Decision and Other Questions, Mar. 9 p 570

Steel Reduced, June 1 p 1296

Pridmore, Edward A., Company: Molding Machines,* Jan. 5 p 86

Pridmore, Henry E.: Electrically Driven Jarring Machine,* June 1 p 1338

Molding Machine with Stripping Plate,* May 25 p 1274

Molding Machines,* Jan. 5 p 87

Prinzess Irene, Large Castings in Fast Time,* June 29 p 1588

Probert, R. Hastings: Ornamental Castings Made in Permanent Molds,* Jan. 5 p 68

Producers, Gas:

- Engine Plants,* Mar. 16 p 682
- Essential Factors in the Formation of Gas, May 4 p 1071
- Experiments, Mar. 30 p 792
- Hilger Revolving Grate,* Mar. 2 p 537
- Küppers,* June 22 p 1534
- Operating Costs of Plants, June 29 p 1570

Producers' Coke Company, Mar. 9 p 588

Production, Intensive, June 8 p 1379

Production Statistics:

- Belgian Iron and Steel 1910, June 29 p 1567
- British Pig Iron Output First Half 1910, Jan. 12 p 122
- British Pig Iron 1910, May 25 p 1257
- British Steel 1910, June 29 p 1555
- Coal 1910, May 18 p 1207
- Connellsburg Coke Output 1910, Jan. 12 p 133
- Copper, Jan. 12 p 147; Feb. 16 p 442; Mar. 16 p 666; Apr. 13 p 884; May 11 p 1150; June 15 p 1462.
- Fluorspar 1909, Mar. 30 p 799
- Germany, Iron Ore, 1910, Apr. 20 p 992; Apr. 27 p 1023
- Iron and Steel for 25 Years,* Jan. 19 p 206
- Iron Ore in 1909 and 1910, Jan. 26 p 284
- Lead and Spelter 1910, May 4 p 1056
- Leaders in Pig Iron, Feb. 2 p 289
- Natural Gas 1909 and 1910, Feb. 16 p 437
- Our Record of Steel in 1910, Mar. 23 p 704
- Pig Iron in Canada 1910, Feb. 23 p 502
- Pig Iron Record of 1910, Feb. 2 p 306
- Rails 1910, Feb. 23 p 461
- Steel Corporation 1901-1910, Feb. 16 p 404
- Steel Corporation's Statement, Mar. 23 p 702
- Steel 1910, Mar. 30 p 782
- Steel in Germany 1910, Apr. 13 p 911
- Steel Making Pig Iron in 1910, June 1 p 1341
- United States Petroleum 1910, Jan. 19 p 226
- World's Copper Production 1910, Mar. 30 p 815

Productive Capacity, Economic Crime of Increasing, June 22 p 1498

Promotion of Engineering Education, June 22 p 1530

Prony Brake, May 25 p 1266

Protective Association, Isolated Plant, Jan. 19 p 201

Pulley, Cone, Molding on an International Turn-Over Machine,* May 11 p 1158

Pulleys with Cork Set in Faces,* May 11 p 1167

Pumps:

- Buffalo Vertical Sump,* June 8 p 1429
- Douglas Contractors' Diaphragm,* Jan. 5 p 53

Efficiency of Coney Island Fire, June 15 p 1462

Pratt Rotrex,* May 18 p 1211

Very Large Dow Triplex,* May 11 p 1164

Punches:

- Ætna Multiple, Large,* Apr. 6 p 860
- Leighton Combination Punch and Sheer,* Mar. 16 p 680
- Pels Deep-Throated Power,* Feb. 9 p 389
- Queen City 48,000 lb. Body Casting,* June 29 p 1571
- Schatz Combination Punch and Shear,* Apr. 6 p 856
- Time Factor and Clearance in Punching Plates,* June 15 p 1480
- Whitney Ball Bearing Rotary Hand,* Mar. 2 p 544

Putnam, W. P.: Annealing Malleable Castings,* Mar. 23 p 726

Q.

Quebec Bridge, Feb. 2 p 313; Feb. 16 p 437; Feb. 23 p 479; Apr. 13 p 901

Queen City Punch & Shear Company: Punch with a 48,000 Lb. Body Casting,* June 29 p 1571

Quenched Tool Steels, Hardness of,* May 25 p 1256

Quincy, Manchester, Sargent Company: Grinding Car Wheels Without Removing Them, Mar. 9 p 620

Quinlan Boiler Company: Punch with a 48,000 Lb. Body Casting,* June 29 p 1571

Quix Pneumatic Hose Coupling Strainer,* Jan. 5 p 45

R.

Rack, Twentieth Century Steel Stock,* Jan. 19 p 226

Railroads:

- Double-Track Mileage Is Small, Feb. 23 p 487
- Educational Bureau, Mar. 9 p 570
- Efficiency and Labor Unions, Feb. 23 p 476; Mar. 23 p 724
- Iron and Steel in the World's, June 29 p 1552
- New Construction and Equipment, Jan. 5 p 30
- Rebates on Iron Ore, May 4 p 1100
- Repair Shop Efficiency, Jan. 5 p 31
- Securities as Investments, Feb. 16 p 405
- Shippers' Service, May 11 p 1151
- World's Mileage in 1909, June 15 p 1461

Rails:

- An Unusual Year, 1910, Feb. 23 p 458
- Canadian Duty on Rerolled, Jan. 26 p 261
- Elongation and Ductility Tests, Apr. 6 p 839
- Heavy Canadian Contracts, May 4 p 1101
- Heavy Section High Carbon, Jan. 26 p 232
- National Railway of Hayti, May 4 p 1086
- New York Central Ferrotitanium, Feb. 2 p 292
- Perennial Problem, Mar. 20 p 758
- Production in 1910, Feb. 23 p 461
- Steel Failures,* Mar. 30 p 780

Railway Convention Exhibits, Atlantic City, June 22 p 1518

Railway Steel Spring Company: Annual Report, Mar. 9 p 591

Rammers:

- Chicago Pneumatic, Jan. 5 p 107
- Cleveland Pneumatic,* Jan. 5 p 107
- Core Bench Jolt,* June 1 p 1340

Ransom Mfg. Company:

- Buffing Lathe,* June 15 p 1485

Rateau Steam Regenerator Company: Installations, Mar. 23 p 735

Ratio of Burden to Labor, Apr. 20 p 965

Ravmond, Dr. R. W.: Resigns, Apr. 6 p 821

Readers of *The Iron Age*, Apr. 13 p 882

JANUARY-JUNE, 1911.

Ready Tool Company:
Boring and Internal Threading Tool, June 29 p 1573

Rebates on Iron Ore, Railroad, May 4 p 1100

Ready Tool Company:
Roughing Tool for High-Speed Steel*, June 1 p 1351

Reaming and Drilling Jig, Wood & Spencer*, Mar. 2 p 556

Reciprocity Agreement with Canada, Feb. 2 p 288

Reciprocity Agreement with Canada: Duties Named, Feb. 2 p 313

Reciprocity and Canadian Steel Interests, Feb. 2 p 310

Recorder Machine Time: National Machine Recorder Company*, Feb. 16 p 425

Recorder, Precision Simmance-Abady CO.,* May 11 p 1162

Records, Analysis of Boiler Feed, Jan. 12 p 170

Records at Ensley Furnaces, Remarkable, May 11 p 1165

Redfield, Wm. C.: American Export Methods, Apr. 27 p 1021

Reed, Francis, Company: New High Speed Sensitive Drills, May 4 p 1093

Regulation of Corporations Proposed, Federal, Apr. 27 p 1025

Reis, John,*, May 4 p 1077

Reliance Electric & Engineering Co.: Novel Application of Motor Drive to Machine Tools,*, May 4 p 1088

Reed, F. E., Company: Heavy Duty Engine Lathes,*, Jan. 26 p 280

Reilly Friction Clutch,*, Feb. 23 p 490

Relief Fund, Carnegie Steel Company, Feb. 9 p 363

Remington Tool & Machine Company: Bench Lathe,*, Mar. 30 p 802

Repair Equipment for Engine Houses, June 22 p 1519

Repair Shop Efficiency, Railroad, Jan. 5 p 31

Republic Iron & Steel Company: Blast Furnaces All Active, Mar. 16 p 660

Blooming Mill with Novel Features, Feb. 2 p 310

Bray, Thomas J., President,*, Mar. 23 p 704

Handbook, Feb. 9 p 370

New Plant, Apr. 6 p 836

New Tube Works,*, Jan. 5 p 41

Operations, June 1 p 1308

Semiannual Report, Jan. 26 p 247

Rice, Richard H.: General Electric Turbine-Driven Compressor,*, Mar. 2 p 538

Richardson-Phenix Company: Model M Lubricator,*, Feb. 2 p 320

Richmond Forgings Corporation: New Plant,*, May 18 p 1210

Ridgway, Craig, & Son Company: Foundry Elevators,*, Jan. 5 p 96

Right Principles in Works Management, May 4 p 1084

Rio Janeiro, Shipyard for, Mar. 2 p 555

Risdon Iron & Locomotive Works: Purchased by the Steel Corporation, May 11 p 1142

Ritz-Carlton Hotel, Machine Shop in, Mar. 16 p 681

Riveter, Shuster Special,*, Mar. 16 p 678

Robbins Machine Company: Patternmakers' Lathe,*, Feb. 2 p 321

Roberts Motor Company: Motor Air Compressor,*, Jan. 12 p 164

Roberts, Percival, Jr.: Testimony at Steel Corporation Investigation, June 15 p 1469

Robins Conveying Belt Company: Automatic Reversing Trippers, Feb. 2 p 291

Robinson Automatic Machine Company's Automatic Polishing Machine,*, May 4 p 1097

Rochester Iron & Metal Company: Growth, Apr. 20 p 992

Rockford Drilling Machine Company: New 14-In. Drill,*, Mar. 30 p 793

Positive Geared Drill Feed,*, June 15 p 1485

Rockford Machine Tool Company: Shaper Down Feed,*, Mar. 30 p 796

Vertical Miller,*, Mar. 2 p 552

Rods a Finished Steel Product, June 29 p 1553

Roebling's, John, Sons Company: Wire Rope of Exceptional Type,*, Feb. 16 p 444

Rogers, Brown & Co.: Exhibit,*, June 1 p 1338

Thirtieth Anniversary, Jan. 26 p 277

Rogers-Brown Iron Company: Annual Report, Apr. 20 p 981

Rogers-Brown Ore Company: First Ore From the Cuyuna Range, May 25 p 1258

Roll-Over Core Machine,*, Apr. 27 p 1024

Rolled and Cast Material, Competition Between, June 1 p 1294

Rolling, Metal, in the United States, Apr. 20 p 966

Rolling Mill for St. Louis, New Steel, Apr. 6 p 857

Rolling Mill, Standard Motor-Driven,*, Apr. 20 p 988

Rolls with Passes Cast In, Chilled,*, May 25 p 1269

Roof, Iron, Still Good After 40 Years, Mar. 30 p 777

Rope: Gore Wire,*, Apr. 20 p 975

Paper, Mar. 30 p 799

Transmission Splicing,*, Apr. 27 p 1032

Wire, of Exceptional Type,*, Feb. 16 p 444

Rotrex Pump,*, May 18 p 1211

Roughing Tool for High-Speed Steel,*, June 1 p 1351

Runout Stopper, Paxson,*, Jan. 5 p 116

Russian Pig Iron Soaring, June 8 p 1421

Rust, Electricity and Fence Wire, Feb. 9 p 369

Rust-Proof Slag Paint, May 11 p 1167

Ryan, Thomas F.: Electricity on a Plantation, Feb. 2 p 328

Ryerson, Joseph T., & Son: Annual Meeting, Jan. 26 p 234

S.

St. Louis Foundry Foremen's Association, Jan. 19 p 176

St. Louis, New Steel Rolling Mill for, Apr. 6 p 857; June 22 p 501

Safety Association, Industrial, Mar. 9 p 587

Safety Collars for Emery Wheels, Mar. 30 p 804

Safety Devices for Iron Mine Workers, June 22 p 1539

Salary Loan Evil, June 1 p 1318

Salesman, Engineer as a, Jan. 19 p 200

Salesmen Seeking for New Customers, Feb. 9 p 349

San Francisco, What Union Labor is Doing for, Feb. 16 p 420

Samuel, Lionel: Securing Foreign Government Contracts, May 4 p 1074

Sand Blast: Drucklieb Multiple Injector,*, Apr. 13 p 923

Drucklieb Specialties,*, Jan. 5 p 103

Kelly High Pressure,*, Jan. 5 p 106

Pressures, Feb. 9 p 350

Tilghman Tumbling Barrell,*, Jan. 5 p 105

Sand Blending Machine, Standard,*, Jan. 5 p 114

Sand Dryer, Pangborn Ideal,*, Jan. 5 p 112

Sander, Atha Automatic Handle,*, May 18 p 1218

Sand in the Foundry, Handling,*, June 8 p 1422

Sand Mixers: Auto,*, Jan. 5 p 112

Paxson Grooved Roller,*, May 4 p 1101

Sellers Centrifugal,*, Jan. 5 p 113

Sand Sifters: Arcade Rotary,*, Apr. 27 p 1042

Deane,*, Jan. 5 p 111

Gregg Oscillating,*, June 22 p 1525

Hanna,*, Jan. 5 p 110

Saw and Burring Machine, Ajax Hot,*, Feb. 2 p 318

Saw Bench, Oliver New Universal,*, Jan. 5 p 109

Saws: Armstrong-Blum High-Speed,*, June 1 p 1364

Covel Automatic Sharpener,*, Apr. 6 p 866

Newton Cold,*, Mar. 30 p 795

North Wales Geared Power Hack,*, Feb. 16 p 443

Nutter & Barnes Automatic Sharpener,*, June 1 p 1350

Scale, New Pennsylvania Railroad Track,*, Apr. 13 p 924

Schaffer, Charles: New Charcoal Blast Furnace, May 4 p 1069

Schatz Mfg. Company: Combination Punch and Shear,*, Apr. 6 p 856

Schellenbach Geared Head Lathe, 16-in,*, Jan. 12 p 166

Schellenbach, W. L.: Cincinnati's Industrial Department, Mar. 30 p 797

School, Navy an Industrial, Apr. 27 p 1004

Schuchardt & Schütte: Cutting Worm Gear on Gear Hobbing Machine, June 29 p 1573

Cutting Worm Gears with a Fly Cutter,*, May 25 p 1268

Schwedtman & Emery: European Methods of Accident Prevention and Relief, Mar. 16 p 667

Science, Business Administration as a Constructive, Mar. 16 p 662; Mar. 23 p 722

Scientific Industrial Operation, Apr. 13 p 922

Scientific Management, Conference on, May 4 p 1087

Scientific Management, Labor-Speeding Under, Apr. 13 p 884

Scientific Management—Taylor's Book, June 22 p 1520

Scott, Roscoe: Steel Mill Lighting,*, Apr. 6 p 862

Screw, Hart Hollow Cap,*, Feb. 9 p 389

Screw, Hart Hollow Cap,*, Feb. 9 p 389

Scullin-Gallagher Iron & Steel Company: Andrews Side Frame Patent Sustained, June 1 p 1347

Sellers' and Buyers' Bureau at Cleveland, Ohio, May 4 p 1101

Sellers, Wm., & Co.: Centrifugal Sand Mixers,*, Jan. 5 p 113

Selling Machinery, Ethics of, June 15 p 1448

Separator, New Cutler-Hammer Magnetic,*, June 29 p 1581

Shafts of Record Size, Concrete, Jan. 5 p 30

Shapers: Cincinnati, with Jib Crane,*, Mar. 23 p 728

Rockford Down Feed,*, Mar. 30 p 796

Steepoe 24-in. Back-Geared with Speed Box,*, Mar. 2 p 545

Stockbridge 16-in. Single-Geared,*, May 18 p 1213

Shapes by Cold Rolling of Standard Sections, Forming Special,*, May 18 p 1215

Sharon Steel Hoop Company: New Band Mill, June 29 p 1566

Sharpener, Covel Automatic Circular Metal Saw,*, Apr. 6 p 866

Shears: Handy Slitting,*, Apr. 6 p 866

Leighton Combination Punch and,*, Mar. 16 p 680

Schatz Combination Punch and,*, Apr. 6 p 856

Sheet Steel, Needed Standard for, June 22 p 1535

Shenango Steamship Company: Two 617-Ft. Ore Vessels Ordered, Feb. 9 p 374

Sheet and Tin Plate Trades in 1910, Jan. 5 p 64

Shepard Electric Crane & Hoist Company: Electric Foundry Crane,* Jan. 5 p 95

Sherman Anti-Trust Law Muddle, May 25 p 1272

Sherman, P. Tecumseh: Workmen's Accident Compensation in Seven States, Apr. 6 p 842

Shipyards, New Work at Lake, Jan. 26 p 285

Shop Efficiency, Railroad Repair,* Jan. 5 p 31

Shop Floors,* Feb. 9 p 378; Feb. 16 p 426

Shop Management, Modern, Apr. 20 p 970

Shop Operations, Standards of Efficiency in, Jan. 19 p 204

Shops of Improved Construction, Machine and Boiler,* Jan. 19 p 216

Shops in South African Mines, Underground, Mar. 30 p 759

Shot and Gas Cavities in Iron Castings,* June 1 p 1339

Shuster, F. B., Company: Special Riveter,* Mar. 16 p 678

Sprue Cutters,* Jan. 5 p 117

Siberian Exposition, First West, Feb. 2 p 312

Sibley Machine Tool Company: Four-Spindle Drilling Machine,* June 1 p 1347

Stationary Head Drilling Machine, 24-in.,* May 4 p 1089

Sifters:

- Deane Sand,* Jan. 5 p 111
- Gregg Oscillating Sand,* June 22 p 1525
- Hanna Sand,* Jan. 5 p 110

Silicon and Manganese in Foundry Practice,* June 1 p 1348

Silicon Alloy, Outerbridge, Jan. 5 p 44

Simmance-Abady CO₂ Recorder, Precision,* May 11 p 1162

Slag, Protecting Metal from Superincumbent, June 29 p 1554

Slags, Effect of Titanium Alloy on, Mar. 16 p 657

Slip-Over Boxes and Bands, Diamond,* Jan. 5 p 115

Slocum, Charles V.: Titanium in Iron and Steel, June 1 p 1322

Sloss-Sheffield Steel & Iron Company: Annual Report, Mar. 23 p 728

Sly, W. W., Mfg. Company: Tumbling Mills,* Jan. 5 p 104

Smith, Andrew: Metal Perforating Process,* Mar. 16 p 672

Smith, Charles G.: Safety Collars for Emery Wheels, Mar. 30 p 804

Smith & Caffrey Company: New Eureka Snap Flask,* Jan. 5 p 116

Smith, Charles L.: Cincinnati Iron Trade in 1910, Jan. 5 p 62

Smith, J. D., Foundry Supply Company: Drucklieb Sand Blast Specialties,* Jan. 5 p 103

Snyder, F. T.: Reliability of Electric Furnaces, Jan. 26 p 266

Societa Anonima Ilva: Italy's Greatest Steel Plant, Mar. 30 p 761

Souther, Henry, Engineering Company: Laboratory, Feb. 16 p 418

Souther, Henry: Needed Standard for Sheet Steel, June 22 p 1535

Southern Companies May Merge, Apr. 6 p 825; Apr. 13 p 907

Southern Supply and Machinery Dealers' Association, Feb. 2 p 323; Apr. 6 p 840; Apr. 13 p 904

Southwark Foundry & Machine Company: Reversing Convertible Simple or Compound Engine,* Apr. 13 p 930

Spang, Chalfant & Co., Inc.: Annual Meeting, Jan. 19 p 176

Specifications for Cold Drawn Weldless Steel Tubes, British, Apr. 27 p 1024

Speculators, Instructive Reading for, May 18 p 1195

Speidel, J. G.: Ceiling Electric Elevator Machine,* Jan. 12 p 165

Speller, F. N.: Process of Manufacturing Locomotive Boiler Tubes,* May 4 p 1104

Spelter and Lead Production in 1910, May 4 p 1056

Spencer Wire Company: Universal Chain Oil Feed,* June 29 p 1587

Spinner, Grant Multiple Spindle Rivet,* Jan. 26 p 279

Splicing Transmission Rope,* Apr. 27 p 1032

Spout, Hooper Continuous Pouring,* May 25 p 1267

Springfield Mfg. Company: New Dry Grinder,* Mar. 23 p 743

Sprue Cutters:

- (See Cutters)

Square, Noyes T,* Feb. 9 p 387

Stack, Steel, for 10,800-hp. Boiler Plant,* May 18 p 1221

Standard for Sheet Steel, Needed, June 22 p 1535

Standard Machinery Company: New Reducing Presses,* Jan. 12 p 163

Sprue Cutter,* Jan. 5 p 116

Unusual Press Installation,* Feb. 23 p 494

Standard Mfg. Company: Motor-Driven Rolling Mill,* Apr. 20 p 988

Standard Oil Company: Tin Plate Purchase, Jan. 19 p 206

Standard Reinforcement for Concrete, Pittsburgh, Mar. 23 p 725

Standard Samples of Steel and Ore, New, Feb. 2 p 327

Standard Sand & Machine Company: Sand Blending Machine,* Jan. 5 p 114

Standard Scale & Supply Company: Eclipse Concrete Mixers at Chicago Cement Show, Feb. 9 p 376

Large Contract for Scales, May 18 p 1194

Standard Screw Company: Annual Report, May 25 p 1275

Standardization by the Automobile Engineers, Apr. 6 p 857

Standardizing Flask Pin Holes,* Jan. 26 p 234

Standards, Bureau of:

- Emery Testing Machines, May 4 p 1103

Standards for the Various Kinds of Pig Iron, June 8 p 1400

Stanwood, James B.: Ratio of Burden to Labor, Apr. 20 p 965

Starters, Magnetic Switch Motor,* Apr. 6 p 847

Staybolt Press, Labor-Saving,* May 25 p 1266

Stead, J. E.: Steel Ingots Treatment,* May 25 p 1262

Steam and Exhaust Pipe Size Charts,* Feb. 23 p 500

Steam Engineers' Convention, June 15 p 1477

Steam-Hydraulic Forging Press,* June 15 p 1471

Steam, Long Distance Transmission, Feb. 23 p 496

Steel:

- And Iron Production for 25 Years,* Jan. 19 p 206
- Association of American Manufacturers, Annual Meeting, Mar. 9 p 595
- "Building Up" Impurities in, Feb. 23 p 480; Mar. 2 p 537

Capacity in Germany and at Home, New, May 4 p 1054

Castings in Fast Time,* June 29 p 1588

Depreciation of Unprotected, Feb. 2 p 306

Electric, Production at a German Works, May 4 p 1079; May 11 p 1126

European Syndicates, Jan. 26 p 273

Features of a Modern Foundry,* Apr. 6 p 852

From Basic Pig Iron, Germany Making Electric, Jan. 5 p 39

Hardness of Quenched Tool,* May 25 p 1256

Ingots Treatment,* May 25 p 1262

Manufacturers Confer on Trade Conditions, Jan. 19 p 208

Mill Lighting,* Apr. 6 p 862

Navy Tool, Revised Specifications, June 29 p 1568

Our Record Production in 1910, Mar. 23 p 704

Prices Reduced, June 1 p 1296

Production in 1910, Mar. 30 p 782

Rail Failures,* Mar. 30 p 780

Soft, Influence of Manganese on, Apr. 13 p 913

Super-Vitrite High-Speed, Jan. 26 p 282

Tests of, at Watertown,* May 18 p 1200

Titanium in Iron and, June 1 p 1322

Works Labor Conditions, Betterment of, May 11 p 1144

Stenotype, Feb. 9 p 375

Stephens-Adamson Mfg. Company: Automatic Reversing Trippers, Feb. 2 p 291

Offices, Jan. 19 p 215

Stepto, John, Shaper Company: 4-In. Back Geared Shaper with Speed Box,* Mar. 2 p 545

Sterling Steel Foundry Company, May 4 p 1081

Sterling Wheelbarrow Company: Flasks,* Jan. 5 p 115

Stevens, Charles J., Company: Modern Steel Products Warehouse,* June 29 p 1590

Stimpson, H. F.: Business Administration as a Constructive Science, Mar. 16 p 662; Mar. 23 p 722

Work of the Efficiency Specialist, Mar. 30 p 760

Works Administration as a Constructive Science, Jan. 26 p 248

Stirling, Robert R.: Packing Machine,* Jan. 19 p 225

Stockbridge Machine Company: 16-In. Single Geared Shaper,* May 18 p 1213

Stoker, Detroit,* Feb. 9 p 384

Stopper, Paxson Runout,* Jan. 5 p 116

Storage Batteries, Feb. 23 p 474

Stove Founders' and Molders' Conference, Jan. 19 p 203

Stove Manufacturers, National Association of: Convention, May 18 p 1232

Strainers:

- Buffalo Feed Water,* May 18 p 1222
- Quix Pneumatic Hose Coupling,* Jan. 5 p 45

Straub, Theo. D.: Large Basic Open-Hearth Furnaces, Jan. 19 p 201

Street, A. L. H.: Judicial Decisions of Interest to Manufacturers, Jan. 5 p 17; Feb. 2 p 343; Mar. 9 p 595; Mar. 30 p 771; June 22 p 1514

Strong Steel Foundry Company, May 25 p 1261

Studding Machine, New Metal,* Apr. 20, p 987

Sturtevant, B. F., Company: Foundry Blowers,* Jan. 5 p 101

Sullivan Machinery Company: Changes in Officers, Feb. 9 p 389

Sulphuric Acid, Pneumatic Handling of,* Mar. 9 p 616

Sulphur in the Air and Metal Corrosion, June 29 p 1589
 Sump Pump, Buffalo Self-Contained Vertical,* June 8 p 1429
 Super-Vitrite High-Speed Steel, Jan. 26 p 282
 Superintendents and Foremen, Cleveland, Mar. 23 p 717
 Superior Charcoal Iron Company: New Charcoal Pig Iron for Chilled Car Wheels, Mar. 9 p 695
 Supply and Machinery Convention, Triple: Announcements, Feb. 2 p 323; Feb. 16 p 406; Mar. 30 p 788
 Convention, Apr. 6 p 840; Apr. 13 p 904
 Superior Tumbling Mills,* Jan. 5 p 104
 Sure Center Finder,* Apr. 27 p 1031
 Svea Caloric Engine Test,* Jan. 5 p 33
 Swaging Machine, Langelier,* May 25 p 1261
 Swaine Mfg. Company, Fred J.: Kant-Leak Kleets and Press,* Mar. 16 p 675
 Swank's, Hiram, Sons: New Fire Brick Plant, Apr. 20 p 992
 Swayne, Noah H., 2d: Pig Iron Output in Two Panics,* Apr. 6 p 824
 Swedish Iron & Steel Corporation: Unusual Stock of Swedish Steel, June 1 p 1365
 Swedish Iron Ore, Electric Smelting of, Feb. 16 p 419
 Swift-Waters Mfg. Company: Plant to Be Sold, May 18 p 1217
 Syndicates, European Steel, Jan. 26 p 273
 System, Value of, Jan. 12 p 121

T.

Tabor Mfg. Company: Efficiency Methods, Apr. 13 p 902
 New Jarring and Roll-Over Molding Machines,* Jan. 5 p 86
 Taft Plan to Lease Water Power, Feb. 9 p 373
 Tapping Machine, Interesting Application of a Barnes,* June 29 p 1580
 Tariff: Commission Convention, Jan. 19 p 207
 Foreign Work of Bureau of Manufactures, May 18 p 1214
 Hysterics and Industry, Apr. 27 p 1004
 New Free List, Apr. 20 p 947
 Reciprocity Agreement with Canada, Feb. 2 p 288
 Revision Begun, Apr. 20 p 974
 Unexpected Addition to the Free List, June 1 p 1205
 Taylor, Ellsworth M.: Sound Business Methods in the Foundry, Jan. 5 p 74
 Taylor, Frederick W.: Skeptic on Some Efficiency Figures, Apr. 6 p 820
 Technology, Congress of, at Boston, Mar. 9 p 592; Mar. 16 p 686; Mar. 30 p 788; Apr. 20 p 967
 Temperature Controlling Instrument, Automatic,* June 8 p 1418
 Tennessee Coal, Iron & Railroad Company: Ensley Rail Mill Closed Down, May 4 p 1071
 Remarkable Records at Ensley Furnaces, May 11 p 1165
 Terminals, Erie Canal, on Lake Erie, Apr. 27 p 1021
 Terry Steam Turbine Company: Turbine Driven Gas Blowers, Apr. 13 p 933
 Test of O. K. Tools, Recent,* Feb. 23 p 491
 Test, Svea Caloric Engine,* Jan. 5 p 33
 Testing Machines at the Bureau of Standards, Emery, May 4 p 1103
 Testing Materials, American Society for Feb. 2 p 313; Apr. 27 p 1035; June 1 p 1207
 Testing Materials, International Association for, Mar. 9 p 590

Testing Plant, Government Hydraulic, Feb. 2 p 289
 Tests: Elongation and Ductility Rail, Apr. 6 p 839
 Herrick Rotary Engine, Jan. 5 p 71
 Steel at Watertown,* May 18 p 1200
 Turbine Driven Furnace Blower, May 4 p 1070
 Thermits, June 22 p 1538
 Thermometer, Bristol Class 111 Recording,* Jan. 19 p 213
 Thomas, E. P.: President United States Steel Products Company, Feb. 2 p 293
 Thomas, Prof. Carl C.: Meter for Measuring Gases,* Mar. 16 p 676
 Threaders: Murcley Motor-Driven Pipe,* Apr. 27 p 1036
 William 12-In. Steam-Driven Pipe,* May 18 p 1218
 Ties, Hill Rail Fastener for Steel,* June 29 p 1591
 Tilghman-Brooksbank Sand Blast Company: Sand Blast Pressures, Feb. 9 p 350
 Sand Blast Tumbling Barrel,* Jan. 5 p 105
 Tin Plate and Sheet Trades in 1910, Jan. 5 p 64
 Tin Plate Purchase, Standard Oil, Jan. 19 p 206
 Tin Plate Trade, Welsh, Jan. 12 p 157
 Tires, Cause of the Shelling of Wheel,* June 29 p 1577
 Titanium Alloy Mfg. Company: Titanium in Steel, Mar. 16 p 657
 Titanium Alloy on Slags, Effect of, Mar. 16 p 657
 Titanium for Malleable Iron, June 1 p 1323
 Titanium in Iron and Steel, June 1 p 1322
 Tobacco Decision, American, June 1 p 1296
 Toby, S. T.: Ethics of Selling Machinery, June 15 p 1448
 Toledo Electric Welder Company: Automatic Welding of Hoops, May 25 p 1269
 Exceptionally Small Electric Welding Machine,* Apr. 27 p 1038
 Practical Side of Electric Spot Welding,* May 18 p 1208
 Toledo Machine & Tool Company: Large Single Crank Press,* May 4 p 1087
 Toledo Pipe Threading Machine Company: New Pipe Threading Tool,* Feb. 9 p 386
 Tool Factory, Modern Electric,* May 4 p 1106
 Tool for High-Speed Steel, Roughing,* June 1 p 1351
 Tool Holder, Almond,* Mar. 23 p 542
 Tools and Appliances, New, Jan. 12 p 133; Feb. 2 p 332; Feb. 9 p 390; Mar. 9 p 628; Mar. 16 p 687; Mar. 23 p 745; Mar. 30 p 773; Apr. 6 p 838; Apr. 13 p 896; May 4 p 1109; May 25 p 1251
 Tool Steel, Navy, Revised Specifications, June 29 p 1568
 Torrance Malleable Iron Company: Very Complete Foundry Trolley System,* Feb. 23 p 493
 Townsend, H. P., Mfg. Company: High-Speed Drill Press,* June 29 p 1580
 Track Scale, New Pennsylvania Railroad,* Apr. 13 p 924
 Tractor Works, International Harvester,* June 29 p 1582
 Trade Balance Due to Our Manufacturers, Our, May 25 p 1236
 Trade of the United States with Canada, Feb. 23 p 502
 Trade with Latin-America, Our, Feb. 16 p 422
 Traffic Club of Pittsburgh, Apr. 6 p 825
 Transformers, Triumph, Type L,* Feb. 2 p 330
 Transmission Appliances, Positive Improved,* May 11 p 1163
 Transmission Gear Company: Harris Transmission Gear,* May 18 p 1212
 Trunks, Prof. C. L. W.: Future in Blowing Engine Practice, June 15 p 1463
 Trippers, Automatic Reversing, Feb. 2 p 291
 Triumph Electric Company: New Drive for Planers,* June 20 p 1573
 Type L Transformer,* Feb. 2 p 330
 Trolleys: Delta and Changeezy Tramrail,* Jan. 5 p 93
 Yale & Towne Mfg. Company, Jan. 5 p 94
 Tropenas Converter Company: Converter with Double Door Bottom, Apr. 27 p 1018
 Truck, Automatic Electric Freight,* May 11 p 1161
 Truck, Angle Steel Tool,* June 29 p 1575
 Tube Works, Republic Iron & Steel Company's, New,* Jan. 5 p 41
 Tubes, British Specifications for Cold Drawn Welded Steel, Apr. 27 p 1024
 Tubes, Process of Manufacturing Locomotive Boiler,* May 4 p 1104
 Tubing, New Heinle Method of Making Square, June 29 p 1587
 Tufts, C. G.: Coke-Oven Gas in Open-Hearth Furnaces, June 22 p 1501
 Tumbling Barrels: Baird Improved,* Feb. 23 p 489
 Calumet Crane Type,* Feb. 2 p 330
 Northern Engineering Works,* Feb. 2 p 327
 Ohio Sand Blast* (Drucklieb), Jan. 5 p 103
 Sly,* Jan. 5 p 104
 Superior,* Jan. 5 p 104
 Tilghman,* Jan. 5 p 105
 Tungsten Mill Cluster Lamp, Benjamin,* Feb. 2 p 331
 Tupper, C. A.: Air Compressor Regulation,* June 22 p 1536
 American Machinery in Europe, May 18 p 1198; June 15 p 1481
 Name Plates on American Machinery, Mar. 2 p 518
 Turbine and Its Lessons, Geared, Apr. 6 p 819
 Turbine-Driven Furnace Blower, Economy Tests of a, May 4 p 1070
 Turbine-Driven Gas Blowers, Apr. 13 p 933
 Turbine Installation, Interesting Curtis,* Feb. 23 p 492
 Turbine Reducing Gear, De Laval,* Apr. 13 p 919
 Turbines and Reduction Gears for a Naval Vessel, Westinghouse, May 18 p 1232
 Turbines in the New York Post Office, Kerr,* Apr. 27 p 1040
 Turin International Exposition, May 4 p 1071
 Turpentine, Government Asks for a Substitute for, May 18 p 1209
 Twentieth Century Steel Stock Rack,* Jan. 19 p 226
 U.
 Uehling Instrument Company: Waste Meter,* June 29 p 1574
 Underwood, Congressman, Oscar W.: Tariff Views, Jan. 19 p 198
 Underwood, H. B., & Co.: Allner-Boswell Radius Planer Attachment,* Apr. 27 p 1038
 New Power Bender and Straightener,* Mar. 9 p 596
 Unemployment Insurance in Great Britain, May 4 p 1072
 Union Elbows, Jefferson,* June 1 p 1365

Union Steel Casting Company:
Equipment, Mar. 30 p 781
Extensions, Apr. 6 p 825

United Engineering & Foundry Company:
Blooming Mill with Novel Features, Feb. 2 p 310
Buys Another Plant, Jan 5 p 29
Forging Press Catalogue, June 15 p 1449
Forging with a High Speed Hydraulic Press,* Jan. 26 p 282

United Iron Works:
Pneumatic Handling of Sulphuric Acid,* Mar. 9 p 616

United Shoe Machinery Company:
Country Club for Employees, Jan. 12 p 159

United States Metal Products Company, Mar. 30 p 783

United States Steel Corporation:
A Thousand an Acre for Connellsburg Coal, June 15 p 1447
Additions to Fleet, Feb. 23 p 495
Air Cooling System for Sheet and Tin Plate Mills, May 4 p 1069
And the Administration, June 15 p 1462
Annual Meeting, Apr. 20 p 949
Annual Report, Mar. 23 p 718
Buys Bassett-Presley Company, June 14 p 1465
Buys Coal Lands, June 8 p 1380
Buys Risdon Works, May 11 p 1142
Changes in Officers, Feb. 2 p 293
Construction in Birmingham District, May 4 p 1089
Earnings in 1910, Feb. 2 p 292
Exports in 1910, Jan. 26 p 233
Five New Merchant Mills at Gary,* Mar. 9 p 597
Investigation, June 1 p 1309; June 8 p 1404; June 15 p 1466; June 22 p 1532
Iron Ore in Hundreds of Millions of Tons,* Mar. 9 p 618
Official Changes,* May 4 p 1077
Output in 1910, Jan. 12 p 120
Payments for Hill Ore, Jan. 12 p 163
Policy of Publicity, June 15 p 1448
President Corey Resigns, Jan. 5 p 7
President Farrell,* Jan. 12 p 123
Production, 1901-1910, Feb. 16 p 404
Production Statement, Mar. 23 p 702
Quarterly Statement, Apr. 27 p 1006
Safety Devices for Iron Mine Workers, June 22 p 1539
Steel Prices Reduced, June 1 p 1296
To Be Investigated, May 18 p 1193
Unfilled Orders, Jan. 12 p 147; Feb. 16 p 442; Mar. 16 p 666; Apr. 13 p 906; May 11 p 1124; June 15 p 1463
Vice-President Dickson's Resignation, Mar. 23 p 727

United States Steel Products Company: E. P. Thomas, President, Feb. 2 p 293

United Vacuum Appliance Company: Connersville Blower Applied to Vacuum Cleaning,* May 11 p 1166

Universal Boring Machine Company: No. 3 Boring Machine,* Mar. 30 p 790

Universal Saw Bench, Oliver New,* Jan. 5 p 109

University of Wisconsin:
Long Distance Transmission of Steam and Its Effect on Power Plant Economies, Feb. 23 p 496

Unloading Pig Iron With Lifting Magnets,* Apr. 6 p 865

Unloading Plant, New Brown Ore,* Apr. 6 p 861

Utah, Manufactures in, May 4 p 1057
Utilizing Blast Furnace Wastes, June 8 p 1397

V.

Vacuum Cleaning, Connersville Blower Applied to,* May 11 p 1166
Valves:
Cutler-Hammer Solenoid Operated,* Mar. 16 p 680
Hydromatic Water,* May 18 p 1219

Machine for Boring Engine,* May 25 p 1282

Van Alstyne, David:
Modern Shop Management, Apr. 20 p 970

Vanadium in Cast Iron, June 8 p 1398
Vanadium Mines Company, May 25 p 1260

Vanadium Sales Company of America, June 8 p 1432

Vehicles, Advantages of Long Stroke Motors for Commercial, Mar. 23 p 744

Venezuela, Public Works of, June 29 p 1593

Ventilating Device, Reversible Window,* May 25 p 1281

Ventura Disk Fan,* May 18 p 1222

Vermillion Iron Ore Explorations,* Apr. 20 p 990

Victor-Balata & Textile Belting Company, May 11 p 1142

Vitrolite Company:
Improvements, June 8 p 1432

Vulcan Detinning Company:
Annual Report, May 11 p 1127

W.

Wallace Supply Company:
Hand Power Bar Bender,* Mar. 30 p 792

Walker, Robert A.:
Pittsburgh Iron Trade in 1910. Jan. 5 p 56

Warner & Swasey Company:
Combination Turret Lathe,* June 8 p 1424

Warwick Iron & Steel Company:
Annual Report, Feb. 9 p 368

Water Filtration for Industrial Purposes, Jan. 26 p 271

Water Heating, Bates Improvement in Feed,* June 29 p 1592

Water Power, Taft Plan to Lease, Feb. 9 p 373

Water Power Development Needed, More, Jan. 26 p 246

Water, Treatment and Purification of Boiler Feed, Mar. 2 p 533

Water-Wheels, Notable Installation of Pelton-Francis,* May 18 p 1221

Waterbury Company:
Gore Wire Rope,* Apr. 20 p 975

Waterbury Farrel Foundry & Machine Company:
Cam Pillar Press,* Apr. 27 p 1036

Watertown, Tests of Steel at,* May 18 p 1200

Watson-Stillman Company:
Handy Hydraulic Press,* June 29 p 1578

Watters, Thomas C.:
Determination of Manganese in the Presence of Chromium, May 11 p 1156

Waverly Warehouse, Extras on Bars and Shapes from, May 11 p 1143

Weaver Mfg. Company:
Roller Jaw Chuck,* Jan. 19 p 223

Webber, William O.:
Gas Producer—Gas Engine Plants,* Mar. 16 p 682

Remarkable Boiler Performance, May 25 p 1238; June 22 p 1500

Webster Mfg. Company:
Improvements, Feb. 2 p 309
New Plant, Mar. 9 p 616

Weigher, New Liquid,* June 8 p 1432

Weimer Machine Works Company:
New Cinder Car,* Jan. 5 p 46

Welch Hammer & Machine Company:
New Hammer of the Helve Type,* May 25 p 1273

Welding Company, Jan. 5 p 49

Welding Machine, Exceptionally Small Torpedo Electric,* Apr. 27 p 1038

Welding of Hoops by Toledo Welder, Automatic, May 25 p 1269

Welding, Practical Side of Electric Spot,* May 18 p 1208

Welfare Work, May 25 p 1276

Welfare Work, Central Station, Apr. 20 p 973

Welfare Work of Electric Lighting Companies, June 8 p 1398

Welfare Work, Steel Manufacturers Consider, May 4 p 1056

Welsh Tin Plate Trade, Jan. 12 p 157

Western Electric Company:
Annual Report, Mar. 30 p 776
Fiscal Year, Jan. 12 p 169

Western Steel Corporation:
Improvements, Jan. 12 p 145

Westinghouse Electric & Mfg. Company:
Air-Cooled Choke Coils,* June 29 p 1576

Annual Report, June 15 p 1461

Apprenticeship System,* Apr. 6 p 848

Direct Current of 1500 Volts for a Railroad, June 22 p 1501

New Interpole Direct Current Generators,* Apr. 27 p 1037

New Pennsylvania Electric Locomotives, Mar. 9 p 593

Type E Alternating Current Generator,* Feb. 9 p 377

Westinghouse Machine Company:
Apprenticeship System,* Apr. 6 p 848

Turbines and Reduction Gears for a Naval Vessel, May 18 p 1232

West Penn Steel Company:
Extensions, Apr. 20 p 979

West, Thomas D.:
American Foundry Practice and Its Demands, Feb. 2 p 311

Gas Cavities and Shot in Iron Castings,* June 1 p 1339

Shot Iron and Hard Spots in Castings, Jan. 5 p 52

Wheeler, C. H., Mfg. Company:
Rotrex Pump,* May 18 p 1211

Wheeler Condenser & Engineering Company:
Large Condenser Installations, Apr. 20 p 967

Wheeling-La Belle Steel Merger Off, Apr. 6 p 837

Wheels:
Asa W. Whitney Car, Mar. 23 p 716
Cast Iron, and the Grinding Machine, Feb. 23 p 459

Davis Cast Steel Car,* May 4 p 1090

Ferromanganese in Car Wheel Iron, Mar. 16 p 644

Ferromanganese in Chilled Cast Iron, Apr. 6 p 820

Grinding Car, Without Removing Them, Mar. 9 p 620

Kirk & Blum Adjustable Emery Hood,* Apr. 13 p 933

McConway Car,* Mar. 30 p 789

New Charcoal Pig Iron for Chilled Car, Mar. 9 p 605

Number of Car Wheels, Apr. 20 p 947

Wheel Tires, Cause of the Shelling of, June 29 p 1577

White, Albert E.:
Iron Ore Briquette Specifications, Feb. 9 p 374

White Irons and the Prevention of Growth in Castings, Mar. 23 p 744

White Star Individual-Continuous Oiling System,* May 11 p 1160

Whiting Foundry Equipment Company: Cupola,* Jan. 5 p 99

Whitney, Asa W.:
Car Wheels, Mar. 23 p 716

Whitney Metal Tool Company:
Ball-Bearing Rotary Hand Punch,* Mar. 2 p 544

Wiener, Ernst, Company:
Foundry Cars,* Jan. 5 p 97

Wilbraham-Green Blower Company:
Green Foundry Blowers,* Mar. 9 p 621

Wiley & Russell Mfg. Company:
Combination Opening Die Machine,* Mar. 2 p 554

Wiley, Brent:
Motors for Driving Main Rolls of Mills,* Feb. 16 p 438

Williams, Franklin:
Quix Pneumatic Hose Coupling Strainer,* Jan. 5 p 45

Williams, Henry:
Navy Yard Apprentices, Apr. 6 p 850

Williams, John S.:
Federal Regulation of Corporations
Proposed, Apr. 27 p 1025

Williams Tool Company:
12-In. Steam-Driven Pipe Threader,*
May 18 p 1218

Wilson, Governor Woodrow:
Corporations, Jan. 19 p 174

Wire:
Cable Conveyor for Handling Kegs,*
May 11 p 1165

 Cambria Steel Company's New Plant,*
Mar. 23 p 730

 Museum of the Industry,* June 22 p
1522

 Rope of Exceptional Type,* Feb. 16 p
444

 Rope Trade Inquiry, Jan. 5 p 5

 Standard Lengths for Test Pieces,
Feb. 23 p 459

Wire Machine, Blashill & Gray Barb,*
Jan. 5 p 53

Wire Specialty Works:
New Metal Studding Machine,* Apr.
20 p 987

Wisconsin Engine Company:
Its New Management, Mar. 9 p 593

Wise, J. B.:
M. R. V. Brass Melting Furnace,*
Feb. 9 p 388

Women's and Minors' Wages, State
Control of, June 29 p 1554

Wood & Spencer Company:
Adjustable Snap Thread Gauge,* Mar.
9 p 621

 Reaming and Drilling Jig,* Mar. 2 p
556

Wood, Alan, Iron & Steel Company:
Special Bridge for Ladle Cars,* Apr.
27 p 1031

Wood, H. I.:
Standardizing Flask Pin Holes,* Jan.
26 p 234

Wood, Henry M.:
Accident Prevention in the Machine
Shop,* May 18 p 1204

 Safeguarding Against Fire, Apr. 20 p
948

Woodbridge, Dwight E.:
Exploration of Cuban Iron Ores,*
Apr. 13 p 914

 Iron Ore in Hundreds of Millions of
Tons,* Mar. 9 p 618

 Iron Ore Reserves Underestimated,
May 4 p 1080

 Vermillion Iron Ore Explorations,*
Apr. 20 p 990

Worcester Metal Trades Annual Meet-
ing, Mar. 16 p 666

Works Administration as a Construc-
tive Science, Jan. 26 p 248

World's Railroad Mileage in 1909, June
15 p 1461

World's Railroads, Iron and Steel in
the, June 29 p 1552

Worm Drive for Automobiles, Advan-
tages of, May 4 p 1070

Worm Gear on Gear Hobbing Machine,
Cutting, June 29 p 1573

Worthington, Henry R.:
New Liquid Weigher,* June 8 p 1432

Wrenches, New Cresco Monkey,* Mar.
16 p 679

Wyoming Automatic Eliminator,* Apr.
13 p 918

Y.

Yale & Towne Mfg. Company:
Hoists and Trolleys,* Jan. 5 p 94

Will Establish a Canadian Plant, Apr.
6 p 841

York Mfg. Company:
Machine and Boiler Shops of Im-
proved Construction,* Jan. 19 p
216

Youngstown, Ohio, Greater Activity at,
Feb. 9 p 366

Youngstown Sheet & Tube Company:
Will Build Open-Hearth Steel Plant,
June 15 p 1448

Yuba Construction Company, Feb. 16 p
419

Z.

Zecher, Cupola,* Jan. 5 p 98

